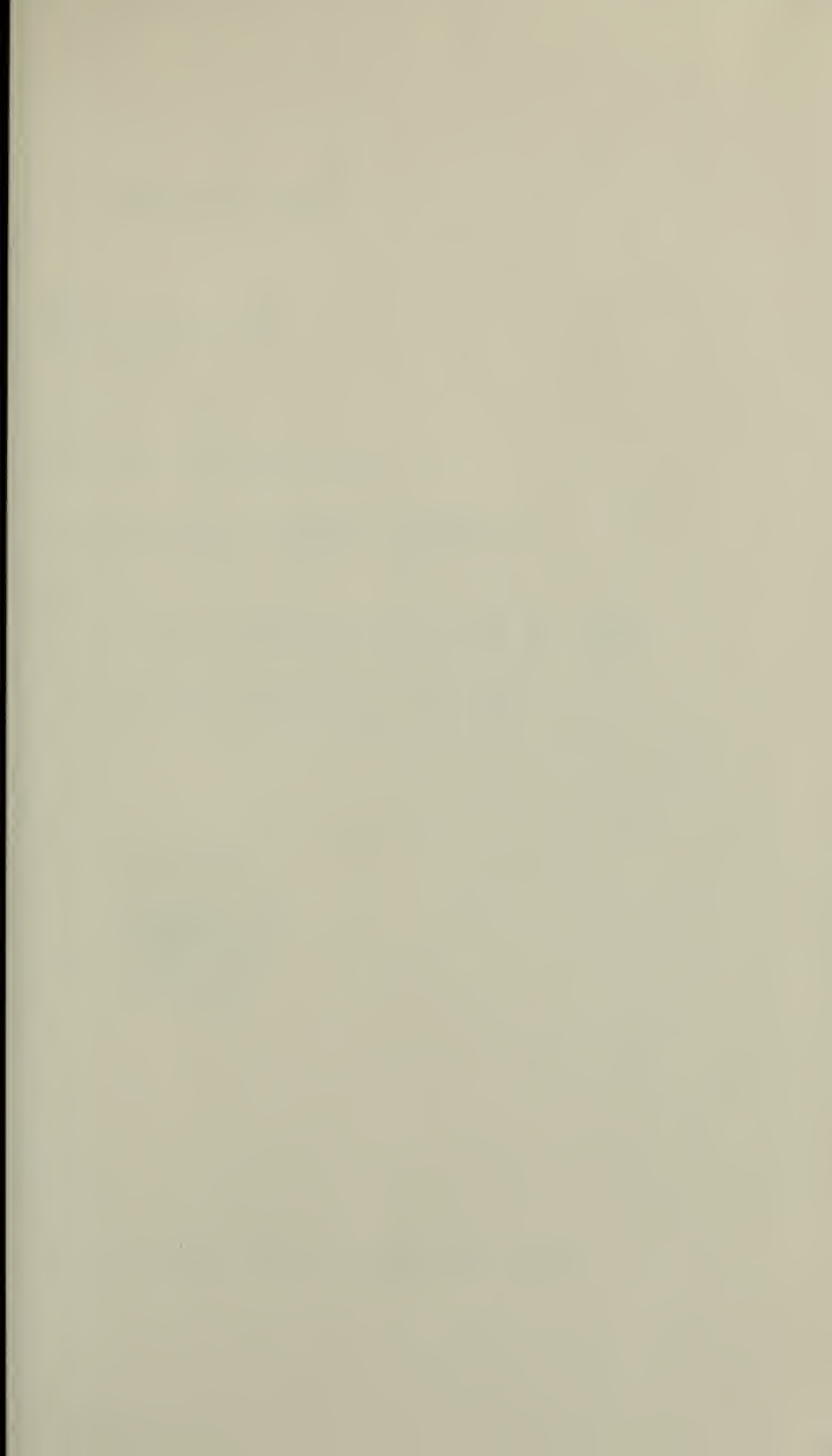




91
96

Annual Report

of the Director
National Park Service

to the SECRETARY OF
THE INTERIOR



Fiscal Year Ended June 30, 1946

REPRINTED FROM
THE ANNUAL REPORT OF THE SECRETARY
OF THE INTERIOR

The National Park Service

NEWTON B. DRURY, *Director*



AS MILLIONS of Americans, freed of wartime controls on travel, poured back into the national parks and monuments during the past year, they had the satisfaction of knowing that the National Park System had remained essentially the same as before the war. The virgin forests still stand; the scenic canyons have neither been blocked nor obliterated; the lofty mountainsides remain unscarred by mining. The great and cherished places of nature and of human history still present what is best and most inspiring of the American scene.

With the return of peace we believe that there are few who would contend that the parks should have been sacrificed, or materially altered except as a last resort. We know that there are many who are profoundly grateful that the war did not bring us to such extremity, and that the resources of the parks have been kept intact in the face of demands for their utilization for war. It is gratifying to record again the fine understanding of park values that so many officers of the Army and Navy and other war agencies possessed, and their willingness, and genuine desire, to turn to other fields for critical materials and lands whenever it could be shown that the needs of a Nation at war could thus be met.

This first year of postwar operations in the National Park System has involved a process of reconversion and of resumption of normal activities and responsibilities that proved fully as difficult and vexatious as was anticipated when the lifting of travel restrictions last August set millions on the road. Travel returned immediately—and somewhat surprisingly, considering the general condition of automobiles and tires—to normal and higher-than-normal volume. The process of adjustment to it, however, was slowed by an insufficiency of personnel, both in the National Park Service and concessions; by the deterioration of both the Government's and the concessioners' facilities; and by the serious shortage of equipment. Reduced to hardly more than a custodial basis during the war, with many regular functions either greatly curtailed or entirely eliminated, the field organizations—those charged with on-the-ground management of the parks and monuments—have made an effort to meet the demands made upon them that deserves full recognition.

1946 greatest travel year.—The floodgates of travel opened immediately after VJ-day. For months thereafter all previous monthly records for numbers of visitors were broken; parks whose remoteness had rendered them inaccessible to all but a handful of visitors during the war were suddenly hosts to great crowds for which neither the park staffs nor the concessioners were prepared. Nor was it possible, in many instances, to make adequate preparation for many months thereafter.

Travel figures for the National Park Service are based upon a travel year which extends from October 1 to September 30 of the following year. It is anticipated, on the basis of the number of visitors thus far, that the 1941 record of 21,050,426 will at least be equalled and probably will be surpassed. During the fiscal year which ended on June 30, attendance at all areas in the system was 16,086,947.

In general, visitors understood the difficulties under which both the Service and the concessioners were endeavoring to care for them, and most of them accepted cheerfully the inconveniences of a period of reconversion. There were complaints, of course, but the number was infinitesimal in comparison with the millions who were happy to have an opportunity once again to visit the national parks.

Personnel insufficient.—When the ebb of wartime travel turned to the flood last August, the roll of regular employees of the Service contained approximately 1,575 names. During a fall and early winter period which saw all previous attendance records broken, both personnel ceilings and lack of funds prevented any material increase in that number. A measure of relief was obtained when a supplemental appropriation of \$357,650 became available on January 1. This permitted the Service to restore former employees to the rolls as they were discharged from the armed forces or were released by other war agencies or industries, though it did not meet adequately the needs which arose so suddenly with the coming of peace. By June 30, there were 1,795 permanent employees on the regular rolls, and to these had been added 1,524 temporary employees.

The total number of employees paid out of funds directly appropriated to the National Park Service on the latter date was approximately the same as were on the rolls during the 1941 season. It would be natural to infer from this that employment had returned fully to normal. That was very far from being the case, however, for two very important reasons.

During the 8 years that preceded the war, virtually all of the ordinary maintenance work in many of the major areas of the park system, including that required for the many new facilities made possible by Civilian Conservation Corps and other emergency construction agencies, was performed by CCC enrollees, under the direction of CCC foremen. It would be extremely difficult to estimate what this assistance amounted to annually, but several thousand enrollees and supervisory personnel were thus occupied. Today, all the maintenance work they formerly performed is thrown back upon the regular forces.



FIGURE 6. At Yellowstone National Park, Visitors totaled 814,907 during 1946.

And these forces themselves were materially reduced, in effect, by the establishment of the standard 40-hour week for all Federal employees. Employees in the parks formerly worked a 48-hour week, so that this change was approximately equivalent to a decrease of one-sixth in their number, not to mention the other complications which have resulted from its application to operations which, for most areas, are in full swing 7 days a week through much or all of the year.

Many employees have loyally and voluntarily worked much more than the prescribed 40 hours per week without extra compensation. They saw that certain work had to be done, both to serve the visitor and to supply needed protection to the public properties for which they were responsible.

Concession Service Rendered Under Difficulties

The unprecedented wave of travel to the national parks following the war created a host of problems for the concessioners who contract to operate visitors' facilities. Their operations had been drastically curtailed and in many instances entirely discontinued during the war, particularly the hotels and transportation service. Reconversion to peacetime operations involves repairs and improvements the need for which has accumulated over 5 years and which still lags through insufficient supplies of materials, labor, busses, food, and needed specialized equipment. One great handicap in attempting to resume service on a prewar basis has been the lack of experienced personnel. The 5-year break in normal operations, plus war service of many employees, drained off the efficient personnel that had returned annually to form the nucleus of the summer operating staffs, and provided for no training of replacements. Considerable confusion inevitably resulted from the employment of inexperienced help. Under these conditions, the park concessioners acquitted themselves very well, and the visitors were sympathetic with their difficulties.

As happened in the great majority of hotels throughout the country, park concessioners were flooded with requests for advance reservations that far exceeded any peacetime experience. With untrained people handling reservations there were at times unavoidable lapses in service. Although there were some complaints, the number was small in comparison to the total volume of work handled. In one of the most widely-visited western parks, 10 new employees took over the reservations work that formerly had been handled by 2 experienced clerks and yet were unable to keep the volume current. As additional housing could be opened and manned, it supplemented in midseason and fall the various wartime accommodations, and bus service was resumed with such equipment as had not been transferred to war-connected industries. Admittedly, facilities and services to the public during 1945-46 were not—and could not be—up to the usual park standards.

Record registrations and applications for hotel and lodge accommodations made it necessary in the national parks, as in most of the hotels throughout the country, to limit the stay of guests at some parks in order to provide accommodations for the greatest possible number of visitors. No uniform stay limitations were imposed because of the varying conditions existing in different areas. In those parks having the heaviest concentration of travel, as at the South Rim of the Grand Canyon where the requests for reservations far exceeded the accommodations available, stays at hotels and lodges were limited to three days, no exceptions being made even for persons who annually made advance reservations covering periods ranging from a month to the entire summer. Much of the travel in the fall and winter was composed of members of the armed forces who were still taking the opportunity to visit national parks as leave and travel conditions permitted; and the concessioner and Service officials alike made maximum efforts to care for these visitors.

Facilities returned by the military.—All concession facilities used by the armed forces during the war, including the Ahwahnee Hotel in Yosemite National Park, the Arlington and Majestic Bath Houses in Hot Springs National Park, and Frijoles Lodge in Bandelier National Monument, were returned to the concessioners for civilian use. Rehabilitation of the Ahwahnee Hotel, which had been remodeled and refurnished when it became a naval convalescent hospital, had not been completed by the end of the fiscal year.

Rates.—Some increases in costs to the public were made early in the year to offset the price of labor and food supplies. Approval of new rates by the National Park Service was subject to the regulations of the Office of Price Administration. In arriving at the schedules to be submitted for the 1946 season, one major park concessioner last fall planned on increases above the 1941 levels of approximately 40 to 50 percent in salaries and wages of employees, the latter largely of the temporary type. The law of supply and demand entered the picture, however; and when the season opened this operator found it necessary to pay approximately 90 to 150 percent higher wages to his new and inexperienced hotel and lodge employees than he had in 1941. Rates in the parks have not kept pace with rising costs, and in general they compare favorably with those of like outside enterprises.

Wage and hour studies.—A proposed revision in the wage and hour regulations for concessioner employees has been studied, and recommendations on new regulations will be submitted for the approval of the Secretary at an early date. The regulations, among other things, will provide for a Board of Labor Review to pass on the basis of employment of all concessioner employees.

The Western Conference of National Park Concessioners met in Chicago on December 3 and 4, 1945, with many members of the Director's staff

attending certain of the meetings. Among the topics discussed were return to full prewar operations, wage and hour regulations, extension of the operating seasons in the parks, winter operations, the possibility of overstimulation of travel as a result of advertising, and the apparent need to limit length of stay at hotels and lodges.

National Park Concessions, Inc.—This nonprofit distributing corporation continued to furnish concession facilities at Mammoth Cave (Ky.), Isle Royale (Mich.), and Olympic (Wash.), National Parks. It initiated operations in Big Bend National Park in Texas, in accordance with previous arrangements, and prepared to reopen facilities on the Blue Ridge Parkway which had been discontinued because of the war.

A review of the concession policy.—Some phases of the concession policies and practices of the National Park Service were sharply criticized by the Interior subcommittee of the House of Representatives Appropriations Committee when the 1947 Interior Department appropriation bill was reported to the House, after having been the major subject of discussion during the preceding hearings. This criticism was given considerable newspaper publicity, including the comment of at least one syndicated columnist. It has led to careful analysis by the Service of concession practices. Because the Service believes that this criticism was the result of insufficient knowledge of the "how and why" of national park concessions, and the difficult problems involved, there is justification for including in this report the significant facts as to the origins of the concession system and the conditions under which concessions must be operated.

At the outset, these facts need to be borne in mind:

The Federal Government, except in few instances, does not own the buildings and other public accommodation facilities in national park areas. The Congress has never given approval to a general policy of Government ownership of these facilities though many members favor it.

That being the case, it has been necessary to enlist private capital to provide accommodations. Authorization for this procedure was contained in the earliest national park act—that which established Yellowstone National Park in 1872.

Owners of private capital, generally speaking, have erected the buildings, furnished transportation equipment and provided the organization necessary to care for the public staying in the parks. Some have sought this business opportunity; others have been induced to undertake it. In either case, they have not invested their money in these provisions for the public in the parks without a reasonable expectation of fair earnings and the ultimate amortization of their investment.

Existing law forbids concession contracts exceeding 20 years in duration. Since the useful life of such substantial structures as the concessioners are expected to provide is normally more than 20 years, and since Internal Revenue regulations in many cases preclude writing off the investment in this period, this limitation, instead of being for too long a period, as is

sometimes claimed, is in reality too short from the standpoint of the investors of private capital on these Federal lands. It compels either an unreasonably high allowance for depreciation, which usually cannot be allowed, or an implied understanding either that the concession contract will be renewed at the end of the 20-year period or that the Government will give the concessioner an opportunity to recover the remaining value of his investment when the contract expires.

If the Government were to acquire the facilities which are normally operated through concessioners, operation, through concession contracts, would have to be on one or the other of two bases. One would be that it should produce a sufficient return to the Government to meet reasonable interest charges and to amortize the investment during the expected life of the structures. The other would be consciously to permit a lower return and the absorption by the Government of some portion, at least, of this investment, because of the social benefits accruing to the public as a whole, with operation at something less than the cost of rendering the service. In other words, a subsidy. Since only a small percentage of the whole public actually utilizes the facilities, it is doubtful if an adequate case could be made for the second course. In general, it would seem logical that rates for special services such as hotel accommodation, meals, and transportation, even if the plant were Government-owned, should be set at levels calculated to amortize the investment in facilities within the period of their useful life, and afford the operating agencies reasonable compensation for their services.

Operation of concessions in the National Park System has not always resulted in profits to the stockholders. The average return of all concessions in the past 7 years has been under 3 percent. Even in the case of those which have operated at a greater profit, that profit, in most cases, could hardly be considered more than a fair return on the investment, considering the hazards of the business.

For national park concessions operate under a number of serious difficulties and handicaps which are by no means common to similar or related undertakings elsewhere. These justify classifying the investments involved as highly speculative. All are subject to heavy seasonal fluctuations in volume of business; some have periods of less than 2 months of operation at approximate capacity, though burdened with heavy carrying charges throughout the year. Most of them are distant from sources of supply of such things as foods, most building materials, and competent help. Many can maintain only a nucleus organization during the greater part of the year and are compelled to recruit most of their employees seasonally. They are, furthermore, closely regulated by the Government with respect to rates, service, management, and construction of facilities, and are often compelled, in the public interest, to carry on certain lines of unprofitable business. And while the private enterpriser outside of the parks can determine the amount of any kind of accommodation he may wish to supply, the

park concessioner is compelled to be ready to meet with reasonable adequacy the needs of the public on all but the peak-load periods of the season, such as the Fourth of July holiday and the Labor Day week end. All of these factors materially affect the cost of concession operations, their rates, and their attractiveness to private capital.

However, the Federal Government, recognizing its responsibility to meet the basic needs, comfort and convenience of visitors has adopted the only course open to it—the recruitment of private capital on terms that would attract such investment. The National Park Service has long contended that the facilities required to meet this responsibility, if they are to be established within the parks, should be in Federal ownership. The existence of a private vested interest, even though temporary, is basically undesirable, even though it has congressional sanction of long standing. Federal ownership, coupled with actual operation by a competent and carefully chosen concessioner, should make it possible to provide needed services more cheaply. Money costs the Federal Government less, insurance would be unnecessary, and depreciation allowances (made for cost calculations only) could be accurately related to the expected life of structures. Government ownership would have the further advantage of wider latitude in selection of desirable operators than is possible when a considerable private investment has to be taken into account.

Only in a small minority of instances are the concession facilities now in Federal ownership, and in only one of these, Mammoth Cave National Park, can the operation be considered of major importance. At present, housing, meals, transportation, retail stores and other services are furnished in the various areas of the system under 85 concession contracts. The investment of several of the concessioners amounts to several millions of dollars. Developments placed on park lands by private capital have cost more than \$29,000,000. With them, a necessary and useful function has been performed, and the companies performing them have, with rare exceptions, been animated by the desire to serve the public well and fairly. If we were to start over “from scratch,” some kinds of facilities that now exist would not be reestablished; others would be placed in different locations; but, on the whole, the concessioners have met a real need, which could not have been met otherwise, and have done it well.

With the approval of the Secretary of the Interior, plans have been made to appoint a committee of experts to make an early and dispassionate study and appraisal of national park concession procedure, and to formulate recommendations for its improvement.

Background of park concession policy.—Concessions, and the need for them, extend back far beyond the establishment of the National Park Service 30 years ago. They go back, indeed, to the beginnings of national park history. The Congress, unwilling in those earliest years even to provide for park maintenance and protection, included in the Organic Act of March 1,

1872, establishing Yellowstone National Park, a provision authorizing the Secretary of the Interior in his discretion to "grant leases for building purposes for terms not exceeding ten years, of small parcels of ground, at such places in said park as shall require the erection of buildings for the accomodation of visitors * * *." Ten years proved too short a period to enable private companies to install the proper types of accommodations and furnish regular service with any assurance of a fair return upon their investment. The result was a chaotic situation, as hotel competed against hotel and agents of various transportation companies hounded prospective passengers. Park visitors were the sufferers from the mismanaged and competing concession operations. While on vacation the average American neither likes to be besieged by representatives of various caterers to his comfort nor to take time to shop around on the ground to secure the lowest rates.

To insure greater stability of investment and operation, the Congress in 1907 amended previous authority to permit the issuance of concession leases for periods not to exceed 20 years. Later acts, including that creating the National Park Service, carried a similar provision.

Even before the establishment of the National Park Service, when the late Franklin K. Lane appointed Stephen T. Mather (later to become first Director of the National Park Service) as Assistant to the Secretary, in charge of national parks, the concession problem came in for critical analysis. Mr. Mather worked unceasingly to improve concession service through the making of more favorable contracts, elimination of undesirable services, enforcing contract provisions more consistently than had been possible previously, and studying types and locations of accommodations. His successors, Horace M. Albright and Arno B. Cammerer, likewise devoted much time and thought to the concessions system, realizing its importance in assuring public enjoyment of the parks.

It was not always easy to interest private capital in establishing adequate, dependable tourist facilities. In several instances, Mr. Mather appealed to businessmen in communities near certain parks to develop necessary accommodations as a matter of civic pride, in the face of dubious prospects of profit.

A particularly troublesome concession problem has been that of transportation. In at least two major national parks, Mount Rainier and Rocky Mountain, competition threatened an impossible situation in the early days of the National Park Service. "Jitney" operators of one type or another demanded the right to transport visitors from railheads to hotels. However, the park concessioner, operating under franchise from the Federal Government, was compelled to furnish service during the operating season, whatever the weather, for one passenger or a carload. Dependable regular service was guaranteed by this contract with the Government. On the other hand, the irresponsible operator of jitney service made hauls in

good weather and at times of peakloads, thus depriving the concessioner of an opportunity to make a profit to offset the losses sustained when travel was at low ebb. The unlicensed competitors sought to take the cream of the business, but with no guarantee of service.

Every effort has been made to solve this problem fairly and in the public interest. Years of experiment and experience had proved the impossibility of assuring satisfactory service under conditions of unregulated competition. The alternative which seemed most likely to produce adequate facilities and service for the visitor and to attract concessioners willing and able to assume continuous responsibility for such service was one under which at each area a single well-financed operator provided each type of service, and sometimes several types, under conditions and at rates regulated by the Government. This policy, now of many years standing, has resulted in a degree of reliability of service that appears to have justified it.

Start toward Government ownership of facilities.—A beginning in Government ownership of concession facilities was made in the middle 30's, when it became possible to construct several small concession units with funds and labor contributed through emergency construction programs. These were owned by the Government, but operated by private concessioners.

The most significant development along this line, however, came in 1941, with the formation of a private nonprofit distributing corporation known as National Park Concessions, Inc., to operate the hotel and other facilities for visitors at Mammoth Cave National Park. The physical properties had come into the possession of the United States when they and the lands upon which they are located were donated to the Federal Government for national park purposes.

Another nonprofit distributing organization, Government Services, Inc., has also become interested in the operation of federally owned national park concession properties. A strong organization that has been in existence for more than a quarter of a century, it operates cafeterias, newstands, and similar services for Federal workers in Government buildings in Washington, D. C. Well-financed, it is in a position to branch out into other fields.

This type of operation has thus far proved satisfactory from the standpoint both of the public and of the National Park Service. It remains to be seen whether in the larger enterprises it will prove as satisfactory as have been the operations by experienced private concessioners.

Beset by the increased difficulties that surround any operations involving labor, food, and materials under present conditions, and aware of the Department's avowed long-term policy of Government ownership of all fixed assets within the parks, some of the larger and older concessions have indicated a willingness to sell their equity. During the war, one concession corporation offered its facilities for sale at a price of around \$2,000,000.

Unfortunately, no Federal funds could be obtained to buy the properties outright; nor were the nonprofit distributing organizations which were interested in acquiring and operating the concession able to arrange the necessary loan. Negotiations are again under way to obtain a loan for this purpose, with the full support of the National Park Service.

Visitors to national parks are there as guests of the Federal Government. It is the obligation of the Government to see that they are properly treated, get the service they are entitled to, enjoy themselves, and are not overcharged. Until the Government will make the basic investment, the National Park Service hopes to select concessioners that are amply financed to install the facilities, are able to conduct the business in a sound manner, will work closely with the National Park Service, and have sympathy for and understanding of its policies and its obligation to serve the public.

The Problems of Winter Use

Many national parks are unusually beautiful in their winter mantle of snow and ice. A winter visit is a rare experience. Winter sports are exhilarating alike to participant and spectator. The National Park Service is deeply interested in encouraging as much use as possible that does not involve injury to the parks or undesirable commercial or promotional aspects.

Use of most of the parks was curtailed during the war more drastically in winter than at other seasons of the year, since war-caused shortages of funds, personnel and equipment, affecting both the Service and the concessioner, made operation even more difficult than in normal times.

The Service has been devoting special effort to the development of sound winter-use policies. Conferences with members of ski and other outdoor organizations have been a part of that effort, and careful consideration has been given to all their suggestions and their criticisms of the Service's policies. Secretary Krug has indicated that, as funds and facilities become available, the parks should provide wider opportunities for winter enjoyment.

Accommodations.—Among the factors foremost in determining the extent of winter use is that of accommodations. At parks like Crater Lake, Mount Rainier, Lassen, Yosemite, and Sequoia, the majority of the winter sports enthusiasts are in the parks only during the daytime. But there is growing pressure for overnight accommodations and meals, particularly over the week ends. This presents serious financial and operation problems. Cabins suitable for summer have proved inadequate and dangerous, if at all usable, in winter, partly because of the impossibility of heating them adequately and partly because they are not safe under the heavy snows in the high mountain areas. Paradise Inn, at Mount Rainier—long a winter-sports mecca—is a building of several stories, yet frequently it is all but covered by drifting snows which at times have reached the ridge of the

building at the gable end, a depth of 60 feet. Caring for the public is costly and difficult under such conditions. It is highly hazardous to house large numbers of guests in winter in a timber building covered with snow and having few exits. Buildings for winter use should be fireproof and strong enough to stand the heaviest snow loads.

In addition to the heavier fire hazard under winter conditions, the problem of heating is an abnormal one. Even during the summer the hotels in the more northerly parks require heating. To maintain warmth in winter at such altitudes means heavy fuel costs and substantial construction.

All these facts make it obvious that providing sleeping accommodations in the national parks is much more costly in winter than in summer.

In winter, the problem of peakloads, serious enough at other seasons, is intensified because nearly all patronage is concentrated on weekends and holidays, yet it is necessary to keep up operations throughout the week, and every week. Experience has shown that, in some parks, to require the concessioner to maintain the normal standard of public service during the winter means reduction in earnings to a point where the concessioner might well decide to withdraw. The Rainier National Park Co., for example, furnished winter accommodations at Paradise Valley for a number of years, but always at a loss. Largely as a result of this service, the company has been fairly consistently in the red on its annual operations. Inherent in any operations there, under the weekend peakload that prevails, is the difficulty of obtaining dependable or sufficient employees when needed, without a heavy pay roll during the remainder of the week with little or no patronage. At Mount Rainier and elsewhere attempt is being made to work out a practical method of furnishing overnight accommodations to the greatest extent justified by conditions.

Parks never closed.—No national park is officially closed during the winter, in the sense that gates are barred or visitors prohibited from entering. The seasonal dates, frequently called the opening and closing dates of the national parks, refer only to the operating season when concession accommodations are fully available. Such closing as does occur is the result of heavy snows that block access roads or entrance to certain high mountain areas. Even those most difficult of access, however, are as available to the modern traveler as they were to those of earlier days. But for the modern traveler living accommodations and roads in these wilderness areas appear to have become necessities.

Needed for increased winter use is a larger permanent staff of rangers. Protection of visitors and rescue and first-aid work, including not infrequent need to take out the victims of skiing and other accidents on rescue toboggans, is a heavy responsibility resting upon the National Park Service when it invites the public to use the parks in winter.

Use during past winter.—Before the war, skiing and other winter sports were exceedingly popular in the mountainous areas, particularly in

Yosemite, Mount Rainier, Sequoia, Rocky Mountain, Crater Lake and Lassen Volcanic National Parks. The only national park able to function fully on a winter basis in 1945-46 was Yosemite. During two war winters, when the Service was without funds to open the road to the famous Badger Pass ski area, the public benefited from the fact that the Navy Department financed the clearing of this road for the benefit of convalescents at the naval hospital then maintained in the park. Last winter skiing hit an all-time high in Yosemite, with 81,770 visitors at Badger Pass, as compared with 74,000 in 1940-41. During the season from December to April inclusive, 105,832 persons entered the park.

Much of last year's criticism of the Service's winter use policy was caused by the fact that at the beginning of the winter season, the road to Paradise Valley in Mount Rainier National Park was not opened. It could not be, as the National Park Service was still operating on a war-time budget and the Congress had not yet provided funds for snow removal. Heavy snowfall closed the road to Paradise about November 15. A fund of \$11,500 carried in a supplemental appropriation, made it possible to undertake work in midwinter to reopen it. By that time the snow was hard-packed, so that dynamiting was necessary on the upper sections; and progress was slowed by stormy weather and heavy snows. The road was opened to traffic on March 3. In no other park, however, were extra funds provided for snow removal until July 1, 1946.

Danger of slides.—Snowslides are an ever-present element of danger in connection with the Paradise Valley winter sport center. As the road climbs to the Valley, cars pass through towering snowbanks. Behind these banks is the weight of snows on the steep slopes above them, always potential sources of devastating slides. Thus far, no serious accident has arisen from this cause; but the public should know that park staff and visitors alike are in some danger every time they drive between the deep walls of snow and the Service must take this into calculation in planning winter use there.

The demand for winter-use areas at Rocky Mountain National Park was much heavier last winter than before the war. Skiing facilities there have been of the simplest types, designed for daytime use only. New interest in the extension of winter activities in the park and in nearby communities has resulted in studies by communities and civic organizations to find areas suitable for winter development, including overnight accommodations. Similar studies are to be made in Olympic National Park.

Sequoia National Park, and the Grant Grove section of Kings Canyon National Park, had all-year use prior to the war. The closing of accommodations for visitors has restricted such use during recent years, but it is expected that winter facilities will be available again during the coming snow season.

Crater Lake has splendid scenic and recreational attractions both summer and winter and excellent possibilities for snow sports. Last spring a plan was announced to establish park headquarters near the south en-

trance, at a lower elevation than the present headquarters. This is a logical step in the development of Crater Lake into an all-year park. During the war years, and last year, it had to be closed during the winter, since snow removal there is an especially costly item.

Yellowstone National Park has never been an important winter-sport center, because of location and weather conditions, but it provided a thrilling wildlife spectacle in pre-war years along its Cooke City Road and elsewhere. Guided wildlife trips in winter should be resumed as soon as funds and conditions permit.

Developments being planned.—The Service is interested in encouraging informal skiing, snowshoeing, ice skating and tobogganing in which all, skilled or unskilled, may participate if they so desire. This use should be on the same basis as summer use—noncommercial, suitable to the areas in which made available, involving no undue disfiguration of important landscapes, and appealing to active, vigorous outdoor people who particularly enjoy indulgence in winter sports in places of scenic beauty.

Development of adequate winter facilities is being planned for all parks where conditions justify it. This is no simple task; it will require a high degree of cooperation by all those concerned, and a sympathetic understanding of the many and serious difficulties involved. The subject has been treated at some length in order to promote that understanding.

Since funds for snow clearance will be available during the coming winter, day use can be assured in most of the areas of heavy snowfall. The provision of overnight accommodation remains the still-unsolved problem in several of them, however. Concessioners cannot be expected to operate for long at a loss. Nor should summer visitors be expected to pay rates high enough to compensate for winter deficits. Thus while winter accommodations are no problem where experience has shown them to be profitable, they can be furnished in others only if the individuals or groups who use them are willing and able to pay rates which can cover the higher costs of winter operation or if it is decided that the Government should meet a part of the extra costs ordinarily borne by the concessioner. The later course might be followed if the Government were to provide light and heat, water and sanitary service, and perhaps some form of maintenance of the buildings used for overnight accommodations. Such a program would require enabling legislation. The extent to which it should be done is a matter of policy for the Secretary of the Interior, the Bureau of the Budget, and the Congress to decide.

Private Lands Still a Major Handicap

At the close of 1946, the critical problem, or group of problems, posed by the presence of more than 600,000 acres of non-Federal lands within the boundaries of national park system areas remained unsolved. The request for a modest \$350,000, recommended by the National Park Service

and approved by the Bureau of the Budget, which would have permitted the service to begin a land acquisition program, was disapproved by the Appropriations Committee of the House. Pleas for its inclusion by the Senate committee were no more successful. The unwillingness of these committees to authorize any land purchase funds except the \$30,000 needed for the Montezuma Well property in Arizona, is largely explainable by the opposition of western members of Congress to the removal of further lands from the tax rolls. This fact emphasizes the disadvantage under which the Service labors, by comparison with other Federal agencies which are permitted to return a portion of their income for the support of local units of government.

The large amount of non-Federal land inside the national parks and monuments over which the National Park Service has no control is a constant threat to the integrity of these areas and a serious impediment, in many cases, to sound development and economical, effective administration. It has been emphasized in the past, but deserves restatement, that delay in starting a regular, orderly program of acquiring these lands involves, at best, ultimate large increases in cost, both because of increased land prices and because of the expensive developments being placed upon them. At worst, it means that scenic and historic resources that should be preserved are destroyed or are so modified as to lose the character that gives them park value. In either event, the people of the United States are the permanent losers.

It is now estimated that between \$1,250,000 and \$1,500,000 annually for a period of as much as 20 years will be required to eliminate the non-Federal lands in the national park system. Meanwhile, every effort is being exerted to effect exchanges, where those are feasible, to accomplish a part of this needed program. Legislation which authorized exchanges with respect to non-Federal lands in Glacier National Park was passed during the closing days of the Seventy-ninth Congress, after the end of the fiscal year. The extent to which this authorization will prove useful is still problematical.

Protection Presents Varied Problems

Placing an area in the National Park System does not result automatically and inevitably in the complete preservation and protection of its natural and historical resources. The desire to log virgin timber or to utilize minerals, forage, and water does not die when these resources are embraced within park or monument boundaries. Periodically the cry about "locked-up resources" is raised by interested parties. Undesirable encroachments appear where too little land is included in a park or monument. Historic or prehistoric structures deteriorate if funds are inadequate for repair or stabilization or for employment of a sufficient protection staff. Endeavors in a few instances to give permanence to avowedly temporary military uses

have presented an additional problem. Even the normal and legitimate use of areas, particularly when concentrated and continuous, in such places as public camp grounds, has a progressively destructive effect on plant life and on the soil itself.

The need of lumber for veteran housing was the reason given for the most recent effort to have a portion of Olympic National Park returned to National Forest status, so that some of its virgin forest might be logged. When the park was dedicated in June, Secretary Krug declared that Congress had decided that matter in establishing the park; that any change in the decision would also rest with Congress; but that any recommendations of the Department would be based upon national rather than local considerations.

"I am convinced," he declared, "that such forest as that which gives Olympic National Park such outstanding distinction must be preserved, if future generations of America are to have the privilege of savoring fully and deeply its wilderness grandeur."

Mining interests oppose the proposal to eliminate from Joshua Tree National Monument minerally valuable lands amounting to approximately one-third of its present area, and which the Department has approved. Instead, they want all but 50,000 acres of this extraordinary desert area to be opened to mineral exploitation.

With the ending of the war, pressure for the wholesale invasion of the western parks and monuments to graze livestock has greatly decreased, though stockmen and their organizations continue to favor the use of much more park and monument land for this purpose. Meantime, existing grazing, covered by lifetime permits to those who had the grazing privilege in a number of areas at the time they were added to the park system, is being reduced very slowly. During 1945 it amounted to 101,315 animal months, a decrease of 5,704 from the previous grazing season. In several areas, notably Saguaro and Organ Pipe Cactus National Monuments, grazing is proving very damaging to desert vegetation; at Saguaro, in fact, the giant cacti are almost bound to disappear if the practice continues, since it has prevented any new growth, while the necrosis which has attacked the mature plants is steadily destroying them.

The enforced deferment of the Service's ruins stabilization work during the war offered a serious threat to the Nation's heritage of antiquities in the Southwest. As a result, the ancient Tumacacori Mission in Arizona has begun to show alarming signs of structural failure. Prehistoric cliff dwellings, pueblos and other pre-Columbian Indian structures require immediate attention by skilled stabilizers. Fortunately there are excellent prospects that emergency work can soon be undertaken with funds for rehabilitation and repair approved in the 1947 appropriation.

The difficulty, or the impossibility, of maintaining historic scenes against undesirable encroachments, where Federal land ownership is seriously in-

adequate, is well exemplified at Fredericksburg Battlefield, where so much of the area consists of drives which traverse narrow strips of park land.

Logging operations now in progress along Lee Drive will denude of timber all private property along the drive. The development of suburban subdivisions near the drive, at the base of Lee Hill, and adjoining park lands on the Chancellorsville battlefield, will inevitably detract from the historic interest of those portions of the park. Similar encroachments by developments not consonant with the historic scene are in progress on the borders of both Gettysburg and Vicksburg National Military Parks.

Although National Park System areas are involved only in a few instances, the Service and the Department have a legitimate concern over the possible effects of river basin developments, including the construction of huge dams and the impounding of great bodies of water, upon historic and prehistoric sites in the areas inundated. These threaten the loss of priceless materials unless the impoundments can be preceded by thorough reconnaissance and by the careful removal of the materials so revealed. Eighty percent of the major archeological sites of the country lie in river valleys; the Missouri and its main tributaries are considered by anthropologists to possess extraordinary importance in the study of early man on the North American continent.

A cooperative agreement between the National Park Service and the Smithsonian Institution placed upon the latter the responsibility for excavation of selected sites and thus the saving of further scientific evidence from permanent loss; and the allotment of funds from the Bureau of Reclamation and the Corps of Engineers has permitted a start on this work. Three field parties in June were assigned by the Smithsonian Institution to make reconnaissance surveys in the Missouri Valley, and arrangement for a start on studies in other river basins was being made. Such surveys will be useless, however, unless they can be followed by a large-scale excavation program in each major dam construction area.

An important step in foreseeing preventable damage by reclamation works was taken this spring, when Secretary Krug approved a memorandum of agreement between the National Park Service and the Bureau of Reclamation which provides for full consultation by the Bureau with the Service in advance of the detailed planning of any reclamation projects which would in any way affect the areas within the National Park System.

To the request of the War Department for the permanent use of lands on the Chickamauga Battlefield, for which temporary use had been granted during the war, Secretary Krug returned a vigorous denial.

"Each of the military parks is the last possible debt payment of the Nation to a portion of our soldier dead," he asserted, "and I should be unwilling to agree to the permanent dismemberment of any of these areas except in case of dire national need."

Secretary Krug continued efforts to effect a solution of the Virginia Peninsula traffic problem. The Virginia Highway Department, as well as individuals and organizations in the Hampton Roads region, advocate the construction between Yorktown and Gloucester Point of a high-level suspension bridge which will permit the passage of naval vessels of any class. The Service and the Department have opposed this proposal for several years, and with the cooperation of the Public Roads Administration, have endeavored to obtain favorable consideration of a crossing higher up the river. The massive suspension bridge, if constructed, would tower higher than the Yorktown Victory Monument and would overshadow the battlefield on which American independence was finally and conclusively won and the village in which the Federal Government has striven, at considerable expense, to retain a colonial atmosphere.

Of the effects of human use—complicated by that of animals, in this case—Superintendent White of Sequoia-Kings Canyon National Parks has this to say:

Nature will not restore the over-used areas where men trample and deer and rodents eat all natural growth. Either we replant or we fail at our job of conservation in these parks. To replant we must have a nursery and the personnel to run it * * * We should frankly face the need of setting aside more and larger areas for public use. This is also necessary so that we can rotate the use of campgrounds and other over-used places.

Protection against forest fires effective.—The fire suppression record of the National Park Service continues to be one in which the Department takes pride. More than 9,500,000 acres of forest, woodland and grassland require intensive protection. Yet only 40 out of a total of 335 forest and grass fires in 1945 were allowed to exceed 10 acres in extent. The total burned area was only 4,991 acres, slightly more than half of 1 percent of the area protected. Although the slim organization of fire-control personnel was necessarily composed largely of teen-agers, continuing training and drill made this record possible.

The value of "smoke-jumpers" in suppressing forest fires in remote areas was conclusively demonstrated in Glacier National Park, where crews were parachuted to and suppressed seven potentially dangerous fires, at a time when all available ground forces were engaged on other more accessible blazes. Provision has been made for expansion of this service, which involves close cooperation with the Forest Service in training and utilization.

During 1945, employment of a Civilian Public Service crew at Mount Rainier National Park made possible a start on reducing the serious fire hazard which was created by the presence of countless snags left by former fires. Funds are available for carrying the program forward into the next season.

Prison sentences of 5 years each, meted out to two men convicted of wilfully starting forest fires in Great Smoky Mountains National Park, seem

to have had a deterrent effect, as no further incendiary fires have been reported from the park. The convictions resulted from FBI cooperation.

The use of an orthodichlorobenzene and oil penetrating spray on an epidemic attack of Engelman spruce beetle, which threatened to wipe out the forest fringe around Cedar Breaks National Monument, and on a less extensive mountain pine beetle attack in Rocky Mountain National Park was successful in both cases. Though control measures for outbreaks of the beetle in Grand Teton National Park are under way, the epidemic spread of attacks outside the park, if unchecked, may nullify the effective work of previous years. In Great Smoky Mountains National Park, experimental use of penetrating sprays to combat the southern pine beetle have been successful, and plans have been laid to combat several outbreaks of this insect. There has been effective maintenance control of endemic bark beetle attacks in Mount Rainier and Yosemite. Periodic control work over the years has lessened the over-all damage caused by insects and, in general, park forests are in excellent condition.

White pine blister rust, now entrenched in the northeast and northwest and spreading southward, is the most serious tree disease threatening park and monument forests. The control program, though slowed by the war, continues to progress. Of 450,136 acres in the Service's control program, 241,100 acres have been worked over at least once and 163,071 acres are considered to be on a maintenance basis.

Periodic spraying of the beech in Acadia National Park for control of the European beech scale has proved effective in preventing the inroads of the beech bark disease, which threatens to wipe out much of the beech in the northeast. The control system has been systematized and it is hoped by this means to preserve for posterity a sample of the widespread beech stands which elsewhere seem threatened with extinction.

System areas are sanctuaries for wildlife.—The national parks and monuments are sanctuaries for more than 65,000 hoofed animals and for unestimated thousands of carnivores or flesh-eaters. A list of the bird species undoubtedly would include most of those known to inhabit the United States and its territorial possessions. There are vast numbers of less conspicuous creatures.

Settlement of the American continent has wrought far-reaching changes in the homes of most species. For those mammals and birds which are unable to adjust themselves to close proximity of man or to man-caused changes of environment, the wilderness areas of the national parks and larger national monuments have been all-important to survival. This is true of such species as the grizzly bear, the wolf, the fisher, and the trumpeter swan. Other species, which definitely are endangered and for which various units of the National Park System serve as important retreats, are bighorn, marten, otter, kit fox, cougar, and lynx. The list will be further enlarged, whenever the Everglades National Park is established, to include the Ever-

glades and swallow-tailed kites, Florida crane, roseate spoonbill, the manatee, and the American crocodile. Some of the species named above would probably have become extinct if it were not for the type of protection afforded by national parks.

Basic management policies.—The animal life of the parks serves its highest purpose as a living representation of the original American fauna. Instead of serving as food, fur, or trophies for a few, the wildlife is “utilized,” without being consumed, by millions of Americans who come to the parks to observe, photograph, and study. Predators are protected together with their prey, as a part of a balanced wildlife community. This exhibit of the entire fauna in natural surroundings affords science an unparalleled opportunity for research and the public a unique field for observation and enjoyment.

One of the greatest contributions of national parks to wildlife conservation may be demonstrated in the coming air age, which will render most of the remaining roadless areas accessible by planes, and will bring them within easy travel range of many more millions of people, including hunters. Legally, the parks remain the only inviolable areas where wilderness sanctuaries stand a chance of being held.

Future offers management problems.—The purpose of wildlife management in the National Park System is to preserve the fauna “unimpaired” (act of August 25, 1916, establishing the National Park Service). Insofar as possible, artificialities are kept at a minimum and natural forces are allowed full play. Resort to management is necessary at times, however, even in the largest and least developed of the national parks. Only a few parks or monuments are truly self-sufficient biotic units, and outside influences as well as the effects of man’s occupancy of the parks themselves sometimes require compensatory action.

Population pressures of hoofed animals in a number of the units of the National Park System continue to present problems of wildlife management of varying degrees of seriousness. The elk problem in the northern Yellowstone has existed for at least half a century. When legal hunting north of the park and live shipments from within it failed to hold this herd to the carrying capacity of the range, a considerable number of these animals had to be slaughtered, and the herd was thus reduced to a size (approximately 7,000) for which the range was reasonably adequate. Since that time, hunting in the region to which the elk migrate north of the park has been fairly successful in preventing a material increase. About 2,200 elk were removed by the 1945–46 kill, by hunters outside the park, and a reduction of 2,800 should be made in 1946–47. Some species of forage are improving, but others are making little, if any, progress. Aspen is being extirpated steadily.

Deer reductions at Zion.—Overuse of vegetation by mule deer in Zion Canyon, Zion National Park, since about 1930 had caused marked changes in the aspect of this area. The deer population, therefore, was greatly

reduced by slaughter beginning in 1943. The number of animals will be maintained at a low level for several years to come to permit full recovery of the food plants. On the east rim of Zion Canyon, where an extremely heavy deer population undoubtedly is having a bad effect on the few remaining bighorns, 112 deer were killed in 1945. Many more should be removed to better the bighorns' chance for survival.

A "surplus" of moose existed on Isle Royale, Mich., for more than a decade before inclusion of the island in the national park system. A dense beaver population also occurs on Isle Royale which, by competition for food, intensifies the plight of the moose.

A problem of many years standing in a small scenic portion of Rocky Mountain National Park appears to have been relieved during the winter of 1944-45 by the destruction of 113 deer and 301 elk. The vegetation is reported to be recovering and the remaining deer and elk are well within the carrying capacity of the range.

It is believed in some quarters that establishment of the Jackson Hole National Monument may make it difficult or impossible to control the size of the portion of the southern Yellowstone elk herd that winters on the National Elk Refuge. A portion of the monument area (Antelope Flat) has been open to hunting, and has been the scene of occasional slaughters, but under National Park Service administration would be closed to hunting. A study is being made of the migratory routes and habits of the elk in order to determine the probable effect of prohibiting hunting on Antelope Flat. The Service is cooperating with the Fish and Wildlife Service and the State authorities with the aim of simplifying, rather than making more complex, this already complicated problem.

Mount McKinley wolf reduction.—The Dall sheep population of Mount McKinley National Park has undergone marked reduction during the past decade and is now believed to number about 500 animals. Assertions that wolves are responsible for the reduction have been numerous, though studies made by Dr. Adolph Murie, of the Fish and Wildlife Service, in 1939, 1940, 1941, and again in the fall of 1945 failed to produce conclusive evidence that these assertions were correct. However, as a means of providing possible aid to the comeback of the Dall sheep, the killing of 15 wolves was authorized early in the winter. Immediate efforts to reduce the wolf population were not successful, but a part of the authorized kill was effected during the late spring and early summer of this year. The Service will take whatever steps further investigation shows to be necessary to a proper balance between wolves and sheep.

Restoration of extirpated species.—Restoration of an animal which has been exterminated from a park is desirable in order that that species may again be represented to the public, and because the primitive relationships between species should be restored. If the extirpated species is present nearby, any natural tendency to move back to the park is encouraged. Otherwise, restocking becomes necessary.

Following this principle, the bighorn was restored to Mesa Verde National Park in January 1946 after an absence of a half century, with 14 animals supplied by the Colorado Game and Fish Commission. A number of other projects of like nature should be undertaken.

As a result of a better understanding of aquatic ecology, emphasis has been given in recent years to more natural management of the park fishery. Natural spawning is being relied upon more than formerly to supply fish, though necessarily, artificial culture and restocking must continue to play a part.

Progress has been made by the Fish and Wildlife Service on studies to provide the information which is absolutely necessary for proper fishery management. The bulk of the work has been done in Yellowstone, Glacier, and Great Smoky Mountains National Parks. Research needs to be carried to completion in these parks and extended to a considerable number of other areas where fishery management problems are important and pressing.

Landing Fields in Parks Generally Unnecessary

The annual report for the fiscal year 1944 announced the Service's policy, strongly upheld by the Department, of opposing the establishment of airplane landing facilities within the parks. The policy then announced, and repeated again last year, still stands, though expressions of disagreement with it continue to be voiced by some who feel that the airplane should be accorded equal rights in the parks with the automobile.

The position of the Service is not based upon any prejudice against the airplane as a mode of transportation. It is obvious that increasing air travel to the parks is inevitable. The facts are, however, that the reasonable desires of the airplane advocates can be met quite as satisfactorily without invasion of the parks as would be possible if landing fields and servicing facilities were provided within them. Sightseeing over the parks, reasonably regulated and held to a proper altitude, may well be considered desirable at many places, but can be enjoyed as well from ports situated outside as from those which might be developed inside park boundaries.

Whatever the point at which a plane comes to earth, it then becomes necessary to utilize some other form of transportation to get the visitor and his baggage to such overnight or daytime accommodations as he may seek or to take him to the various points of interest in the park which he may wish to see. Such supplementary transportation can be supplied satisfactorily from an airport such as, for instance, that which now serves the south portion of Grand Canyon National Park or that at West Yellowstone. This is the same principle that now governs rail travel to the parks.

Visitors seek quiet.—Considering then that the lack of landing facilities in a park needs to be no handicap to either the private owner wanting to fly to it or to the commercial airline which wishes to bring visitors there by air, the disadvantages that would result from providing landing and

servicing installations in these areas fully justify the policy that has been adopted. The degree to which the low flying of take-offs and landings would prove a disturbance to park wildlife is problematical; for some rare species, such as the trumpeter swan and the sandhill crane, it would probably be serious. There is also the possibility of increased fire danger and of damage to natural features. The provision of safe facilities obviously would involve major disturbance of and extensive changes in the landscape in most of the parks. Excessive noise also would be a disturbing factor out of keeping with the atmosphere of quiet, a primary objective of most visitors to the parks. That objective would be denied if landing facilities were provided in the parks themselves.

In view of these facts, the policy to which the National Park Service is adhering seems to be abundantly justified. As a corollary of it, the Service is endeavoring to formulate and obtain approval of a regulation that would restrict flights over the parks to altitudes that would minimize disturbance and danger and assure keeping the present environment unspoiled.

Continuing study and observation, together with experience elsewhere, will throw more light on this question. Meanwhile, the Service feels that it should take a conservative position.

Increased Public Safety Sought

Considering the rugged wilderness character of many of the national parks and monuments, and the inexperience of a large proportion of visitors in such surroundings, it is to be expected that among the many million who visit them each year there will be some serious and occasional fatal accidents. No methods can be devised to prevent these entirely, but the National Park Service recognizes that the protection of visitors is a serious and sobering responsibility, and the effort to assure adequate protection is constant.

The recent tragic accident in Yosemite National Park, in which a small boy and the heroic young man who attempted to rescue him were swept to death over Vernal Falls, indicated that the protective rail at that point was inadequate to prevent children from approaching the stream above the falls; and remedial measures are being taken to prevent a recurrence of such accidents, there and at other similar places. However, the great majority of accidents result from failure to heed regulations designed for the safety of the visitor or advice that is based upon long, and often bitter, experience. All too many of them have happened to individuals who have insisted on striking out into the wilderness or undertaking hazardous climbs by themselves.

Only extraordinary good fortune brought a happy ending for the university student who wandered from his companions at the Badger Pass ski area in Yosemite National Park last winter and was lost for 11 days. In this instance, all three of the Service's repeatedly emphasized warnings

to skiers—that they should stay in groups, should stay on marked trails, and should carry matches (for both warmth and signaling should they become lost)—were disregarded.

Regulations just common sense.—It is difficult to get visitors to the parks to realize that park regulations are designed to further their safety, rather than to impose irksome restrictions on their freedom of action, though it is probable that more thought and effort need to be expended in educating visitors not only as to what the regulations are but as to the reasons that make them necessary. Probably nothing better exemplifies this difficulty than the regulations which forbid the feeding of wild animals. It hardly seems possible for anyone who can read to visit Yellowstone or Yosemite National Parks without being aware of the prohibition against feeding the bears. Yet year after year, hundreds of visitors insist on taking chances by handing these genuinely wild animals tidbits of food, and every year has its record of serious and even occasional fatal injuries to those who indulge in the practice. The Service is constantly searching for new methods of impressing upon the public the hazards of familiarity with park wildlife, as well as the injurious effects upon the wildlife itself of unsuitable diet and of dependence upon “panhandling” for food.

The Colorado River, where it runs through Grand Canyon National Park and the Boulder Dam Recreational Area, as well as its upstream reaches, has extended an invitation to the adventurous ever since Major Powell and his party made the descent in 1869. Repeatedly, however, attempts to descend the river have compelled difficult and dangerous searches of the treacherous stream. Renewed consideration is being given to recommending a regulation which would forbid any person running the rapids in Grand Canyon National Park or Boulder Dam Recreational Area, except after a showing that they are properly qualified to do so.

The National Park Service has a safety engineer whose entire time is devoted to the promotion of safety and safe practices. His concern is with the public and with the reduction of unnecessary and avoidable risks to the visitor as well as to the employees of the Service and the concessioners, and to property as well as persons. Every effort will be made to effect prompt improvement of any conditions of hazard which his studies or those of others may reveal.

Service Ill-Equipped for Information Work

The information activities of the National Park Service belong in two main categories, (1) general information, supplied through the publications issued by the Service, through newspapers, magazines, radio, and motion pictures, as well as through correspondence; and (2) interpretation, supplied usually direct to the visitor by ranger naturalists, ranger historians, museum displays, exhibits in place, and special publications. In both of these categories, the Service was compelled to function throughout the year with little more than the meager staffs of war time. Funds

for 1947 are nowhere near sufficient to afford information or interpretive services that park visitors or the public as a whole are entitled to receive.

Nature and history need interpretation.—With the cessation of hostilities and the resumption of recreational travel came an immediate demand from park visitors for the full restoration of the history and natural history interpretive programs. This demand could not be satisfactorily met during the summer months of 1946. Supplemental funds made available on January 1, 1946, enabled the Service to reemploy 19 of the 32 permanent park naturalists who had served in the armed forces or engaged in civilian war work.

So far as possible lectures and guided trips, as well as museum services, were offered during the second half of the fiscal year. Museums, many of which had been closed for the duration, were renovated and made ready for opening; the production of "Nature Notes" was resumed in some of the parks and, generally, the interpretive organizations returned to "business as usual." However, returning employees and those who remained at their posts have been handicapped by the lack of funds for the employment of seasonal ranger-naturalists. In the historical areas demands for interpretive services in many cases preceded the return of staff historians from the armed forces. By the year's end, many historians who had used their specialized training during their service with the Army or Navy, had returned to their former positions. Every effort was made to provide the utmost in service with a limited personnel.

Cooperating museum, library, and natural history associations in several parks and monuments have taken an active part in the park naturalist programs and have rendered particularly effective assistance in selling publications.

Oregon's Advisory Board on Educational Problems of Parks proposed the establishment at Crater Lake National Park of a field school of art and nature appreciation, to be a cooperative effort of the National Park Service and the extension division of the State system of higher education. The proposals submitted by officials of the University of Oregon have received consideration in conferences in the Director's Office and in Eugene, Oreg., and are still being worked upon.

Museum Division activities.—Only one permanent National Park Service exhibit was prepared and installed by Service employees during the year. This is a diorama showing the appearance of the interior of Ford's Theater on the night Abraham Lincoln was assassinated. It is exhibited in the Lincoln Museum, Ford's Theater, Washington, D. C.

Exhibit planning was continued in connection with the project construction program of physical improvements. A special study of the interpretive needs of Great Smoky Mountains National Park resulted in the completion and approval of a museum prospectus as a basis for future planning and development. Museum prospectuses were also completed for Mount Rainier, Glacier, and Zion National Parks.

Special protective and operational studies were made at the Home of Franklin D. Roosevelt previous to its opening to the public as a National Historic Site. Special museum assignments were a study of methods to be employed in an inventory of historic furnishings of the White House and completion of studies for the exhibits in the proposed William H. Jackson memorial room, Scotts Bluff National Monument.

Opportunities to inform public too limited.—During the war, the staff of the Office of Information was reduced to 10 percent of its prewar size and funds for printing of all kinds were very meager. The small staff and limited funds made possible only a bare start, before the end of the fiscal year, on the work of revising and issuing the free information literature required to meet the needs of both actual and prospective visitors, and which had been held almost completely in abeyance during the war. Publications scheduled are being limited to those required for satisfactory field operations and for meeting requests, numbering thousands daily, received by the Director's Office in Chicago, the Washington Liaison Office and the field offices of the Service.

Demands for literature grow.—Requests upon the Director's Office for printed information about the parks increased 115 percent. A much greater volume of requests go direct to the individual areas. The demands will grow as the public learns that booklets are again available. The approximately 100 percent increase in park travel indicates a similar increase in the need of free publications for distribution in the parks.

In consequence of the limited funds available, sharply reduced from the amount recommended by the Bureau of the Budget and still further reduced, in effect, by rising costs during the past few months, the production of sales publications, useful and necessary as they are, will be virtually at a standstill during the coming year.

Manuscripts go unpublished.—Manuscripts of a number of publications, which already represent a considerable investment of public funds in research and writing, must be pigeonholed for the present. This represents a loss to the public. It also is decidedly discouraging to those who have performed the laborious task of preparation. Nor does it encourage others to embark on similar undertakings when there are only slight prospects of publication. Yet these writings, which tell of the meaning of the parks, are an important phase of the Service's work.

Because of staff limitations, the Service is unable more than barely to touch certain important channels of public information, such as radio, motion pictures, illustrated lectures, and photographs. The Department's facilities for radio recording were utilized only twice during the year. A transcribed interview with the Director, to inform the public as to the condition of the parks after 4 years of war and as to the efforts of the field forces to meet the needs of visitors was put on the air by an estimated 130 stations throughout the country. In advance of the dedication of

Olympic National Park, radio coverage of the event in the Pacific Northwest was materially assisted by transcriptions of the Secretary's important dedication address, which were supplied to a number of stations in that region.

To the Service's modest library of motion picture films one picture has been added during the year. Covering Grand Teton National Park and Jackson Hole National Monument, it is composed almost wholly of footage taken by John C. Hanson of Washington, D. C., and William L. Darden of Evanston, Ill., both highly proficient photographers who gladly contributed the results of their work. The Service could readily utilize a considerable number of such films, but lacks the facilities or staff to make effective use of the few good reels it possesses or of its extensive but increasingly obsolescent collection of kodaslides.

Photographic program needed.—With the resumption of peacetime travel, the demands from magazines and newspapers for park materials, both written and photographic, have been extraordinarily heavy. The Service had hoped to be able to employ one photographer during 1947, but the funds appropriated for new positions are not sufficient to permit it. Outside demands and the requirements of the publications program justify a moderate, well-planned program for the making and distribution of photographs, so that the Service may have on hand striking current pictures, not "dated" by automobiles of ancient vintage or by evanescent feminine fashions. The subject matter of the park system deserves to be adequately pictured to the public.

Whole public should enjoy parks.—A comparatively small percentage of Americans can spend the time and funds to become well acquainted with the National Park System at first hand. A good many see few if any of the parks or monuments during a lifetime. The greater number of those who are able to visit any of them see only a small percentage of the whole. The task of the National Park Service, usually conceived to be that of providing enjoyment to those who pass through the park gates, should extend far beyond that. The motion picture, with its effective employment of color, the colored stereopticon slide, good photographs and well-illustrated publications all are capable, in a sense, of bringing the parks to the people, thereby heightening their sense of pride in what they possess and providing a high degree of enjoyment.

It is a part of the business of the National Park Service to encourage and assist the considerable number of persons who make and show good motion pictures of the parks, either as a hobby or professionally. Yet the showing of these reaches only a fraction of the potential audience. The schools, and organizations such as Parent-Teacher Associations that are closely associated with the schools, offer a mass audience which now is reached scarcely at all. Yet every school child should know about the parks—what they are and why they are—and something about how they are managed

and enjoyed. Every school should have on its walls striking pictures of the great places of America, and good books which, by picture and text, will provide knowledge and understanding of them. We believe that it should be possible to provide motion pictures of professional quality at low cost so that school groups and parents alike may derive enjoyment and satisfaction from possessions that many of them may never see in any other manner. The same is true of universities. Making this possible seems to be a legitimate field in which to expend Government funds, without neglecting any opportunity to obtain nongovernmental cooperation in its accomplishment.

Enlightened public needed.—The successful functioning of the National Park System is dependent, to an important degree, on an informed and understanding public. They are the owners of the parks. It is important to widen the circle of the adequately informed who are at the same time sufficiently concerned to take an active interest in supporting and defending sound and foresighted management of natural and historical resources. We consider it necessary and justifiable as a means of holding the successive gains in protecting and making the parks available to the people which congressional action has made possible.

The Advisory Board

The death of Dr. Thomas Barbour on January 8, 1946, was a blow to the Advisory Board on National Parks, Historic Sites, Buildings and Monuments, of which he had been a member since 1941, and to the National Park Service. His place on the board was filled by the appointment of Dr. Harold E. Anthony, dean of the Scientific Staff, American Museum of Natural History. Dr. Theodore C. Blegen, dean of the University of Minnesota Graduate School, was appointed to the vacancy caused by the death of Mr. Edmund H. Abrahams, recorded in the last annual report.

The Board's interim committee met in Washington on December 11 and 12, 1945, to consider post-war problems facing the Service. Acting through Dr. Waldo G. Leland, acting chairman of the Board, the American Council of Learned Societies sponsored a highly profitable meeting of historians at Jamestown, Williamsburg, and Yorktown on May 6 and 7, for discussion of problems relating to the utilization of historic objects and physical remains in research in American history.

Development Planning a Complicated Task

The determination and planning of desirable and essential development programs is one of the major tasks of the National Park Service. It must decide what is needed or likely to be needed, both to provide adequate service and facilities to the visitor and to facilitate administration; what sites are suitable and what kinds of structures will be appropriate and inconspicuous so that their presence will impair as little as possible the scenic, historic and scientific features which it is obligated to conserve.

The unprecedented number of visitors during the past travel season, the 5-year lag in providing additional physical improvements, and the increase of public interest in cold-weather activities which may compel the operation of several additional parks during the winter on a considerably larger scale have shown the need of reexamining existing construction plans and policies. This has been undertaken as extensively as reduced wartime staffs would permit, during the past several years.

Past studies have indicated the advisability of gradual removal of administration and concession facilities, in several of the national parks, from their present sites to new areas; of invoking again the limited-stay policies in campgrounds and concession facilities at the height of the season in such areas as Yosemite Valley; and of considering the possibility of Government construction of facilities in areas where private capital cannot be induced to provide suitable hotels, lodges, meal services and winter sports facilities. While the Service is minimizing the possible future Federal outlay for such facilities, as well as the impact of intensive use, by encouraging the provision of overnight facilities where they can be provided satisfactorily outside, some such developments must, in most cases, be located within park boundaries. The general aim is to avoid concentrations such as that which began nearly a century ago in Yosemite Valley, and to distribute the visitor load more evenly.

The immediate program.—The accumulated building demands of the nation for residential, commercial and industrial purposes are certain to make it difficult in the next few years for Government bureaus to compete in a high-priced, scarce market for skilled building workers, materials and mechanical equipment; and the obligation rests upon this and all other Federal agencies to avoid such competition as much as possible. The best course immediately open to the Service, therefore, appears to be to proceed with major repairs and rehabilitation of existing physical improvements whose usefulness can thus be extended until new facilities can be constructed; to undertake the surfacing, bridge construction and other work that will enable the public to use the roads, trails and parkway projects or parts of projects which are now only partially completed; and to install or repair the essential sewer, water, electrical and communications systems. A coordinate task is the obliteration or, where desirable use can be made of them, the repair of the roads, buildings, warning stations, pipelines and other facilities installed in various units of the park system by military or other war agencies to facilitate the conduct of the war.

The Interior Department Appropriation Act for the 1947 fiscal year makes the following provisions for developments of various kinds:

Parkways (Blue Ridge, Natchez Trace, George Washington, and Foothills), for both construction and maintenance-----	\$11, 000, 000
Roads and trails, including major and minor road and trail construction, advance plans and surveys, and approximately \$2,000,000 for maintenance-----	6, 000, 000
Physical improvements, of which \$1,000,000 is required for repair and rehabilitation of existing structures-----	1, 330, 000

Several areas still undeveloped.—Beginning with 1948 fiscal year, much larger appropriations will be needed if the signs of war use are to be obliterated, the lag in normal construction and maintenance made up, and the development of several major areas provided for. Big Bend National Park and Glacier Bay National Monument, for example, now contain practically none of the roads or other improvements which are essential to public use and enjoyment; Olympic National Park and Great Smoky Mountains National Park are in hardly better development. A number of areas are seriously in need of housing for employees, especially those who are now compelled to occupy houses almost medieval in their lack of conveniences.

Alaska areas require development.—Early development of Glacier Bay National Monument, Alaska, is of interest to the Department of Commerce, the Government of the Territory, and the Department of the Interior, because of the development during the war of a large airport at Gustavus Point, in the monument. Now operated by the Civil Aeronautics Authority, it will be the main airport for large commercial planes from the States, where passengers will transship to smaller planes for various Alaska points, or will continue on the large planes to the Orient. Facilities for the feeding and housing of, possibly, several hundred plane passengers grounded by unfavorable weather for 2 or 3 days do not exist. This factor, combined with the nearness of Juneau, the capital of Alaska, points to early and heavy visitation by both steamship and plane passengers and to the need of accommodations which would serve both groups.

At Mount McKinley National Park, the National Park Service is assisting the Alaska Railroad in developing architectural and general lay-out plans for enlargement of the hotel at McKinley Park Station, and for a lodge at Wonder Lake, situated 80 miles inside the park.

The general interest of the administration in improving the economy and encouraging settlement and development of Alaska places an obligation on the Service to make early plans for the development and administration of the five park system areas situated within the territory. Considerable progress on this task has been made during the past year.

Volume of Cooperative Work Grows

Cooperation by the National Park Service with other Federal agencies and with the States in recreational land planning studies continues to increase in volume, and is rapidly becoming a major responsibility, the extent of which is not generally realized. During 1946, for the first time, a direct appropriation was available to implement the Park, Parkway and Recreation Area Study Act of 1936. This enabled the Service to reestablish, on a modest scale, a staff of technicians whose services were provided to the States on request, to help solve State park problems.

In addition, related work performed for the Bureau of Reclamation and the Corps of Engineers was greatly enlarged. Funds allocated to the

Service by these two agencies have financed investigations of the recreational possibilities of water control projects, and assistance in planning for the protection, development and use of such resources in several major river basins and on hundreds of individual reservoir projects.

Cooperation with Federal agencies.—The National Park Service is but one of a number of Federal conservation agencies which have been called upon to appraise the potentialities, both favorable and unfavorable, of the many impoundment projects which the Bureau of Reclamation of the Department of the Interior, and the Corps of Engineers are planning or have under construction. The Service's part of this work is to determine, with respect to each of these projects, not only whether it has possibilities for recreation but also to aid in determining whether provision for it would be justified, economically and socially. It is additionally concerned with the integrity of the various units of the National Park System that may be adversely affected by such projects. In defending park areas against damage by dam-building and water-control developments, it is the duty of the National Park Service to raise the question as to whether public necessity for irrigation or flood control or generation of power outweighs the potential damage to natural scenery or to significant natural or historic or prehistoric objects or places. Allied to these considerations is concern with the scientific, historic and prehistoric values of all lands which would be affected by water-development projects and with the salvage of cultural materials from lands which are to be flooded. In several cases, such as the Missouri Basin, the Service has been asked to undertake studies on these matters well in advance of construction.

The Missouri Basin—The survey of recreational potentialities in the Missouri River Basin, related to projects of both the Bureau of Reclamation and the Corps of Engineers, begun during 1945, has been continued and enlarged during the past year. Bureau funds of \$10,000 made available for this study in 1945 were increased to \$55,000 in 1946, of which \$20,000 was put at the disposal of the Smithsonian Institution for the conduct of archeological and paleontological investigations of extraordinary importance in this particular basin.

During the past year, the field survey staff of the Service completed preliminary investigations of 11 reservoir sites for the Bureau of Reclamation and 4 for the Corps of Engineers. An expanded program for continuance of the survey has been proposed for 1947.

In other basins.—Studies similar to those in the Missouri Basin were also continued with increased impetus, in connection with other existing and proposed Bureau of Reclamation projects, by the National Park Service and Smithsonian. Following is a brief summary of these:

1. In the Colorado River Basin, preliminary recreational investigations of approximately 120 reservoir sites have been completed, and a comprehensive report has been drafted. Since the survey was started in 1941, \$93,000 has been allotted for it and for publication of the report.

2. Under cooperative agreements beginning 1941, \$19,500 has been advanced for investigations of 138 reservoir sites under consideration by region 5 of the Bureau of Reclamation on 7 river basins in Texas, Oklahoma, and parts of Kansas, Colorado, and New Mexico. An agreement for continuance of this work is being negotiated.

3. Under an agreement approved on May 27, 1946, the Service has undertaken the investigation of 16 reservoir sites in the Pacific Northwest, of which 13 are located in the Columbia Basin. To start this work, \$40,000 has been advanced and a staff is in the process of organization.

4. An investigation of four of the Bureau's Central Valley project sites in California is being conducted pursuant to a pending agreement which provides \$15,000 for the work. It is probable that the Service will be called upon to investigate numerous other projects here, both Bureau of Reclamation and Corps of Engineers.

Corps of Engineers projects.—At the request of the Chief of Engineers, made in accordance with section 4 of the Flood Control Act of 1944, the Service has continued to make preliminary investigations of water control projects under War Department jurisdiction, and to prepare recommendations for their protection and use of their recreational resources. With a fund of \$88,700 advanced by the Corps of Engineers, 68 sites were investigated during the year.

Alaska Highways Report.—The report, entitled "Recreation Resources of the Alaska Highway and Other Roads in Alaska," based upon a survey conducted during 1943-44 by the Service at the instance of the late President Roosevelt, was released by the Government Printing Office in February. Prepared with Alaska Highway funds of the War Department, the report considers the protection of scenic, scientific and historical features of lands adjacent to the highways of Alaska and provides a broad base for establishing facilities for highway travelers in the Territory.

Cooperation with the States.—The sum of \$68,000 was made available to the Service in the 1946 appropriation act for cooperation with the States in park and recreational planning. All State park agencies were advised that such cooperative assistance was again available, and 42 of them indicated their interest in obtaining it upon appropriate occasion. Forty-three requests for specific assistance have been received from 33 States, many of which have involved field consultations and investigations, covering a wide variety of problems. In addition, the Service has continued to serve as a clearing house for information on State parks and related types of areas. State Parks—1945, a pamphlet issued in June, contains tabulations of data furnished by the States on expenditures, sources of funds, attendance, personnel, and land acquisition for the fiscal year 1945.

New Area Added; Others in Prospect

On June 30, 1946, the National Park System consisted of 169 areas. One new national monument, Fort Frederica in Georgia, was established Au-

gust 30, 1945. Built in 1736 by Gen. James Edward Oglethorpe, colonizer of Georgia, the fort was an English outpost against Spain. Credit for acquisition of the lands and resultant consummation of the project is due the Fort Frederica National Monument Association.

By act of March 22, 1946, Custer Battlefield National Cemetery was made a national monument.

Funds were appropriated by the Congress late in June for acquisition of the Montezuma Well property, an area of exceptional archeological and geological interest, as an addition to Montezuma Castle National Monument, Ariz.

The eastern half of Santa Rosa Island National Monument, Fla., was eliminated from the monument and reserved for the permanent use of the War Department, by Presidential proclamation of August 13, 1945. A bill to abolish the national monument and return the remaining lands to Escambia County, for public purposes, was pending in the Congress at the end of the year and has since become law.

Wind Cave National Park was enlarged by approximately 16,000 acres under the provisions of House bill 7004, referred to elsewhere. This will provide more and better range, with an increased water supply, for the bison and antelope herds which are an interesting feature of this park.

Bill would reduce Joshua Tree Monument.—A bill to revise the boundaries of Joshua Tree National Monument, Calif., pending in the Congress at the close of the fiscal year, would also provide an appropriation of Federal funds to purchase the checkerboard of non-Federal lands within monument boundaries. The measure is designed to reduce the area by approximately a third, leaving a total of some 558,560 acres within the proposed boundaries; to consolidate and retain the lands important for their rare desert flora, scenic and geologic interest; and to delete lands in which mineral values are believed to outweigh those for which they were originally included in the monument. The lands to be excluded are not essential for national monument purposes, since they have lost their original character. Their elimination will simplify administration and will release for mining lands better suited to that use. The discriminating support of this proposed legislation by conservation organizations and individuals is gratifying in view of the pressure of some local mining interests and sportsmen to open most or all of the monument to mining and hunting regardless of the national interest.

Touro Synagogue.—Oldest structure of its type in America, Touro Synagogue in Newport, R. I., was designated a national historic site on March 5, 1946. Designed by Peter Harrison, one of the foremost architects of the colonial period and erected in 1763, it is today in essentially its original condition. The structure will remain in non-Federal ownership and will continue to be used for worship.

Pending projects progress.—The famous Adams Mansion at Quincy, Mass., home of generations of the Adams family, is destined to become the

Nation's newest national historic site. At the year's end only formalities of title acceptance remained to be cleared.

No new national park or monument projects were authorized by Congress. Little progress was made on most of the 15 previously authorized projects due to varying circumstances. Lack of funds and personnel prevented determination by the National Park Service of specific area-requirements and boundaries in those cases requiring extensive study.

Everglades' project moving.—The Everglades National Park project gained new impetus with the designation by the Secretary of a minimum area which, when it has been conveyed to the Government free of all reservations, will be acceptable for park establishment. This minimum area designation in no way prejudices attainment of the larger ultimate goal envisioned by those who conceived the project, which the Congress authorized in 1934. Last year the State of Florida conveyed to the United States, subject to certain temporary reservations, all of its holdings, aggregating over 1,000,000 acres, within the minimum area. When all the private holdings within the area so designated are acquired, protection will be insured the unique biological and other features of the area now threatened with impairment or destruction. Pending park establishment, the area already acquired is administered and protected by the Fish and Wildlife Service as the Everglades National Wildlife Refuge. The enthusiasm of the new Everglades National Park Commission recently reactivated and charged by the Governor of Florida with responsibility for acquiring the lands necessary for the park augurs well for the success of the project.

Cumberland Gap project.—Substantial progress has been made by Kentucky, Tennessee, and Virginia in the acquisition of lands for the Cumberland Gap National Historical Park project. Of the 10,000 acres contemplated for this project, Tennessee has acquired virtually all of its portion; Virginia is acquiring its share as rapidly as possible. Kentucky holds title to approximately 85 percent of its quota and has appropriated \$200,000 to acquire the remainder.

The Grandfather Mountain Association, a non-Federal body established to acquire lands for this proposed addition to the Blue Ridge Parkway, continues active, but no lands for the project have yet been conveyed to the Government.

Boundaries of the lands to be included in the Harper's Ferry National Monument were approved by the Secretary, in accordance with the provisions of the Act of June 30, 1944, and the committee on Harper's Ferry National Monument is furthering the acquisition of the 1,383 acres needed for the monument.

The Effigy Mounds National Monument project, for which the State of Iowa has acquired approximately 1,000 acres, lacks only conveyance of the lands to the Federal Government to complete the project.

At the end of the year, House bill 4435, to establish the Theodore Roosevelt National Park, was pending before Congress. It was later passed and sent to President Truman, who vetoed it on the ground that the area, part of the former Roosevelt Recreational Demonstration Area, did not measure up to national park standards.

Monument and committee authorized.—Also pending at the end of the year and later passed and approved were House bill 5125 to authorize the establishment of Castle Clinton National Monument on Manhattan Island, N. Y., and House bill 2851 authorizing the creation of a committee to conduct a study and make recommendations for the establishment of “a national shrines park” centering about the Independence Hall group in the old part of the city of Philadelphia.

Boundaries and projects require study.—During the year, preliminary reports on the boundary status of the 169 areas in the National Park System were prepared in the field and submitted to the Director's Office for review and for determination of priorities for the detailed boundary studies which are to be undertaken. These reports reveal which of the areas now have satisfactory boundaries; which have definitely unsatisfactory ones; and which require further study before the question can be answered. The next step will be to determine whether and where lands are now included in the park system which should be excluded; also what lands, if any, outside of present authorized boundaries should be added. Work directed to this end has been virtually at a standstill during the war years. Material progress is confidently expected during the present year. Ultimate additions to or subtractions from any of the several groups of parks will, of course, require action by Congress.

Closely allied to this task is that of examination and appraisal of areas proposed for addition to the National Park System. Normally, 75 or more suggestions of this sort are received annually. Many proposed areas are patently unqualified and do not require field investigation. Others require careful investigation before any recommendations can be formulated. Those which possess merit, but which are not of national significance, are referred to appropriate state or local officials for consideration.

Since the investigation of proposed new areas virtually ceased throughout the war, there is now an accumulation of several hundred proposals to be studied. These are situated in all parts of the country, including Alaska and Puerto Rico. Thirteen field investigations of park and monument proposals were made during the past year. Of the approximately 50 areas proposed in that period, 17 were determined to lack proper qualifications.

The site of the first test-firing of the atomic bomb, near Alamogordo, N. M., was carefully examined and was reported on favorably with specific recommendations as to boundaries. It is expected that the area will shortly be established as the Atomic Bomb National Monument; and assurance

has been given by the Secretary of War that the airplane which dropped the bomb on Nagasaki will be made available eventually for display there. For security reasons, however, the War Department's continuing custody of the bombing area in which the site is located will defer its opening to the public for some time.

States profit from RDA transfers.—Nine more recreational demonstration areas, containing 106,504 acres, were disposed of during the year, under the authority of the act of June 6, 1942 (56 Stat. 326). The 61,539-acre Roosevelt area in North Dakota was transferred to the Fish and Wildlife Service to become the Theodore Roosevelt National Wildlife Refuge. The other eight were deeded to the States in which they are located, as follows: Alexander H. Stephens, Hard Labor Creek and Pine Mountain, Ga.; Blue Knob, Hickory Run, Laurel Hill, and Raccoon Creek, Pa.; and Swift Creek, Va. At the end of the year, legislation introduced by Representative Hoch of Pennsylvania to return the greater part of the Hopewell Village National Historic Site to recreational demonstration area status was pending. It has since been passed.

Representative Case of South Dakota introduced a bill (H. R. 7004) near the end of the year designed to dispose of the 20,404-acre Custer area in the Black Hills. This bill, passed shortly before Congress adjourned and later approved by President Truman, provided for the addition of the greater part of the area to Wind Cave National Park and for transfer of the remainder, except for a small tract to be added to the Harney National Forest, to the State for addition to Custer State Park.

President Truman has indicated that the Catoctin area in Maryland, site of the retreat used by the late President Roosevelt during the war, and frequently referred to as "Shangri La," should be transferred to the National Capital Parks. It is planned to have legislation to accomplish this introduced in the next Congress.

Six additional areas of this group, containing 36,288 acres, in California, Kentucky, Missouri, and Oregon, are available for transfer. No decision has yet been reached regarding disposition of the Camden Hills area in Maine.

Recreational Areas Need Lands and Development

The assumption of administration of the recreational lands and facilities surrounding Lake Texoma, in Oklahoma and Texas, during the past year, under a temporary cooperative agreement with the Corps of Engineers, brought to four the number of areas for which such responsibilities have been accepted for other Federal agencies. Boulder Dam Recreational Area was the first of these; near the close of 1945, the Shasta Recreational Area, and the Millerton Lake Recreational Area, both in California, were added. An agreement similar to those which apply to the Boulder Dam, Shasta

and Millerton areas is now being drafted for the Franklin D. Roosevelt Lake (Coulee Dam) area.

Effective use of all these areas is dependent on the provision of facilities for the public. A start had been made at Boulder Dam before the war. Negotiations are under way for a needed enlargement of concessioner facilities there. At Shasta and Millerton, a start has been made in determining what is needed, but no funds have been made available for more than minor developments.

Lake Texoma bristles with problems. A proposal early in the year that only two of a number of projected developments be turned over to the National Park Service, not only appeared undesirable to the Service but was strongly protested by the press, organizations and individuals in the surrounding territory, which favored following the plans for the area that had been formulated by the Service. However, though responsibility for the administration of recreation now rests with the Service, some 9,400 acres of additional land are needed. Adequate development for public use is virtually impossible so long as Federal ownership of lands bordering the lake is so seriously inadequate. Developments now under way on private lands will add greatly to the cost of ultimate acquisition.

The National Park Service did not seek this type of responsibility—the administration of recreation on lands and waters under primary jurisdiction of another agency—but it is trying to the best of its ability to carry out the mandate of Congress. No great success can be attained, however, if lands for recreational development are not acquired to meet the requirements of master plans.

Interest in parks increases in foreign countries.—Despite their countries' preoccupation with pressing postwar problems, visitors from every continent—from the Belgian Congo, Brazil, France, Great Britain, China, Denmark, Spain, Finland, the Netherlands, Sweden, Uruguay, India, Honduras—here on official missions either directly or indirectly connected with national park movements or park administration, visited and studied individual parks or the National Park System as a whole during the past 12 months.

Three French visitors made a wide swing to the parks and wildlife refuges in the West, for study of the management of such areas, with particular reference to the possible application of American practices to natural areas in the colonies. The Chinese forester who, during the past 10 years, has managed the Memorial Park of Sun Yat Sen, found his visit to a number of the parks and to Chicago and Washington offices of the Service helpful to the planning of park developments in China. The president of the Institute of National Parks in the Belgian Congo and a representative of England's Ministry of Town and Country Planning visited national park areas and found opportunity to discuss their problems with National Park Service personnel.

Requests for national park literature from many countries were numerous and were met as fully as possible.

War-use permit.—Since VJ-day most of the outstanding permits and authorizations for the use of National Park Service areas and facilities for war purposes have been terminated, and the areas are being returned as rapidly as possible to their former condition. There are still outstanding 68 permits for the use of National Capital Parks areas and 263 affecting other areas. A number of these are now in the process of termination; the War and Navy Departments are continuing to use certain areas on a temporary basis. One parcel of 3½ acres of land was transferred permanently from National Capital Parks to the War Department; seven parcels from other areas in the National Park System, containing a total of 9,600 acres, were transferred to the War and Navy Departments.

During the entire war period, 107 war-use permits were issued for occupancy of National Capital Parks lands, 2,204 for various uses of other National Park System areas. Of the latter group, 6 involved temporary transfer of jurisdiction; 80 were for utilization of minerals, timber, forage or water; 244 for occupancy and use of lands and facilities; 16 for exclusive use of concessioner facilities; 1058 for field exercises; 52 for rights-of-way; 32 for loan or transfer of material or equipment; 655 for hauling over parkways or park roads; and 61 for miscellaneous purposes. No major damage was caused to the National Park System by these war uses.

Dedications Mark Service's Thirtieth Anniversary

Nineteen forty-six brings the National Park Service to the thirtieth year of its existence, the act which established it having been signed by President Woodrow Wilson on August 25, 1916. Shortly thereafter, Stephen T. Mather was appointed its first director, and the fledgling Bureau took over administration of the 14 national parks and 21 national monuments that were then administered by the Department of the Interior.

The thirtieth anniversary of the Service has been variously noted in the press and over the radio. In a number of parks special exhibits have reviewed the history of the Bureau and the development of the National Park System. It has been especially marked by the dedications, already observed or to be observed, of four areas. Three of these, all national parks, have been members of the system for more than 5 years, while the fourth, the Home of Franklin D. Roosevelt National Historic Site, came into Federal possession during the past year.

An act of Congress approved in 1939 (53 Stat. 1062) authorized the head of any executive department to accept any part of the Hyde Park estate of President Roosevelt "for use in connection with any designated function of the Government administered in such department." It was pursuant to the terms of this act that the late President's home and 33 acres of land surrounding it became Federal property in November 21, 1945, and assumed full status as a national historic site. Left subject to lifetime rights



FIGURE 7.—President Truman delivered the dedication address from the front porch at the Home of Franklin D. Roosevelt National Historic Site on April 12, first anniversary of the late President's death.

of use and occupancy by the members of the immediate family, these rights had been surrendered by Mrs. Roosevelt and all the children in order that provision might be made for immediate public use.

The dedication, on April 12, exactly a year after the President's death, was held from the front porch of the interesting, beautifully situated home in which the former Chief Executive had been born and where he had lived most of the happiest years of his life. Some 10,000 persons were present. President Truman delivered a tribute to his predecessor; Mrs. Franklin D. Roosevelt made a brief address of presentation, and Secretary J. A. Krug formally accepted the estate in behalf of the United States. Miss Marian Anderson sang *The Star Spangled Banner*. Director Newton B. Drury of the National Park Service presided. In the audience were high-ranking representatives of the three major branches of the Federal Government as well as of State and local governments, and many of the diplomatic representatives of the United Nations. The radio coverage given the ceremony was one of the most extensive in history.

On the occasion of his first trip to the West after assuming his present office, Secretary Krug also participated in the dedication of Olympic National Park, the 848,000-acre mountain and forest wilderness of northwestern Washington. The ceremony was held on the grounds of Rosemary Inn, on the shores of mountain-surrounded Lake Crescent. On the program were Gov. Mon C. Wallgren, who as a member of the United States Senate had sponsored the legislation to establish the park; Senator Hugh B. Mitchell; and Representative Henry M. Jackson, in whose district most of the park is situated. The gist of Secretary Krug's important statement of policy regarding the preservation of the virgin timber of the park is given elsewhere in this report.

Scheduled for dedication ceremonies are Isle Royale National Park, Mich., on August 27, and Mammoth Cave National Park, Ky., on September 18.

Service Is Seriously Short of Personnel

To accomplish the tasks which the people and the Congress expect of the National Park Service and which are its responsibility under the law, and also to maintain needed protection and services under present conditions, there is a pressing need for additional personnel. The need of larger staffs in the field, to serve the tide of visitors now flowing in, is desperate. As indicated elsewhere, this need is made more critical by the 40-hour work week and overtime requirements. Almost impossible burdens will be imposed upon a loyal staff until further increases in appropriations make it possible to establish an adequate number of additional positions. Few areas are now sufficiently staffed to permit shifting hours of duty to the extent necessary for the conduct of operations 7 days a week; yet 7 days service must be given at most areas a large part of the year. A few of the smaller historical areas close 1 day a week—which gives the personnel

some relief, but which also works a hardship on the visitor from afar who does not know in advance of such closing.

The personnel shortage is acute also in the Director's office in Chicago, the liaison office maintained in Washington, and the four regional offices. It perhaps hits hardest administrative and professional heads who now endeavor to carry on with little or no assistance, but whose efforts, for that reason, do little more than "plug holes in the dike." These responsible employees should have time to think and to work on fundamental problems. It is unsound, economically and professionally, to expect them to carry on without adequate staffs, to devote much of their time to clerical and minor professional tasks, and still to be ridden by the consciousness of work that needs doing but that must remain undone.

No more critical problem confronts the Service during the coming year than that of providing relief to conscientious and overworked personnel. Allied to this need is the necessity of reallocating the technical and administrative positions to bring them in line with those of similar responsibility in other Federal agencies. Until this is done, the Service cannot compete with other agencies in filing vacancies scaled one or two grades lower than comparable positions elsewhere.

The loyalty and high caliber of the Service staff is attested by the fact that few of its professional and administrative officials have been lured elsewhere by the prospect of higher salaries. It is not too much to say that money could not buy the devotion to duty that they have shown during the war years and during the months since the end of the war.

TABLE 1.—*National Park System, travel and area data, June 30, 1946*

[Travel figures for the fiscal year, July 1, 1940–June 30, 1941, the last full fiscal year before the war, are not available for comparison with those of the 1946 fiscal year. Figures for the travel year of 1941, therefore, have been included.]

Areas (classification)	State	Federal land acres	Approximate visitors, fiscal year July 1, 1945–June 30, 1946	Approximate visitors, travel year Oct. 1, 1940–Sept. 30, 1941
NATIONAL PARKS				
Acadia.....	Maine.....	28,382.21	31,424	423,088
Big Bend.....	Texas.....	691,338.95	6,379	(1)
Bryce Canyon.....	Utah.....	36,010.38	73,780	124,098
Carlsbad Caverns.....	New Mexico.....	45,526.59	295,244	284,024
Crater Lake.....	Oregon.....	160,290.33	97,710	273,564
Glacier.....	Montana.....	997,486.80	96,878	179,082
Grand Canyon.....	Arizona.....	645,135.91	333,969	431,816
Grand Teton.....	Wyoming.....	94,892.92	56,604	125,129
Great Smoky Mountains.....	Tennessee, North Carolina.....	460,882.46	945,468	1,247,019
Hawaii.....	Territory of Hawaii.....	173,404.60	418,801	324,728
Hot Springs.....	Arkansas.....	1,019.13	293,461	203,093
Isle Royale.....	Michigan.....	133,838.51	6,122	7,257
Kings Canyon.....	California.....	452,904.82	135,183	172,271
Lassen Volcanic.....	do.....	103,269.28	53,752	108,663
Mammoth Cave.....	Kentucky.....	50,547.51	104,237	158,772
Mesa Verde.....	Colorado.....	51,017.87	21,713	42,079
Mount McKinley.....	Alaska.....	1,939,199.04	133	1,700
Mount Rainier.....	Washington.....	241,524.77	398,458	446,636
Olympic.....	do.....	848,212.30	116,624	92,968
Platt.....	Oklahoma.....	911.97	438,450	316,169
Rocky Mountain.....	Colorado.....	252,625.87	476,098	685,393
Sequoia.....	California.....	385,100.13	227,211	300,012
Shenandoah.....	Virginia.....	193,472.98	690,413	1,054,479

See footnotes at end of table.

TABLE 1.—National Park System, travel and area data, June 30, 1946—Continued

Areas (classification)	State	Federal land acres	Approximate visitors, fiscal year July 1, 1945–June 30, 1946	Approximate visitors, travel year Oct. 1, 1940–Sept. 30, 1941
NATIONAL PARKS—continued				
Wind Cave.....	South Dakota.....	11,718.17	30,589	21,030
Yellowstone.....	Idaho, Montana, Wyoming.....	2,213,206.55	348,880	581,761
Yosemite.....	California.....	756,294.65	482,913	594,062
Zion.....	Utah.....	94,241.06	137,987	190,016
Total.....		11,062,455.76	6,318,481	8,388,909
NATIONAL HISTORICAL PARKS				
Abraham Lincoln.....	Kentucky.....	110.50	37,666	115,726
Chalmette.....	Louisiana.....	33.25	51,588	25,408
Colonial.....	Virginia.....	7,057.16	378,158	2 643,037
Morristown.....	New Jersey.....	958.37	257,904	221,779
Total.....		8,159.28	725,316	1,005,950
NATIONAL MONUMENTS				
Ackia Battleground.....	Mississippi.....	49.15	(3)	(3)
Andrew Johnson.....	Tennessee.....	17.08	20,500	(1)
Appomattox Court House.....	Virginia.....	968.25	12,800	2 50,000
Arches.....	Utah.....	33,769.94	1,371	3,786
Aztec Ruins.....	New Mexico.....	25.88	7,154	12,631
Badlands.....	South Dakota.....	122,812.46	75,235	251,498
Bandelier.....	New Mexico.....	27,048.89	16,538	11,727
Big Hole Battlefield.....	Montana.....	200.00	1,770	(1)
Black Canyon of the Gunnison.....	Colorado.....	13,176.02	7,599	18,444
Cabrillo.....	California.....	.50	(3)	(3)
Canyon de Chelly.....	Arizona.....	83,840.00	1,299	1,916
Capitol Reef.....	Utah.....	33,068.74	(3)	(3)
Capulin Mountain.....	New Mexico.....	680.42	16,750	35,550
Casa Grande.....	Arizona.....	472.50	24,582	18,084
Castillo de San Marcos.....	Florida.....	18.51	260,192	297,620
Castle Pinckney.....	South Carolina.....	3.50	(3)	(3)
Cedar Breaks.....	Utah.....	6,052.20	18,514	16,516
Chaco Canyon.....	New Mexico.....	18,039.39	1,466	1,724
Channel Islands.....	California.....	1,119.98	(3)	(3)
Chiricahua.....	Arizona.....	10,529.80	8,646	12,069
Colorado.....	Colorado.....	18,120.55	25,652	31,333
Craters of the Moon.....	Idaho.....	47,210.67	10,639	21,796
Custer Battlefield.....	Montana.....	765.34	33,569	65,132
Death Valley.....	California.....	1,850,565.20	72,499	96,529
Devil Postpile.....	do.....	798.46	(3)	(3)
Devils Tower.....	Wyoming.....	1,193.91	16,197	32,951
Dinosaur.....	Colorado, Utah.....	190,798.49	5,355	9,133
El Morro.....	New Mexico.....	240.00	1,217	1,300
Father Millet Cross.....	New York.....	.01	(3)	(3)
Fort Frederica.....	Georgia.....	74.53	4,900	(1)
Fort Jefferson.....	Florida.....	86.82	5,588	918
Fort Laramie.....	Wyoming.....	214.41	7,606	6,747
Fort Matanzas.....	Florida.....	18.34	9,156	17,055
Fort McHenry.....	Maryland.....	47.64	439,357	660,403
Fort Pulaski.....	Georgia.....	5,427.39	(4)	55,536
Fossil Cycad.....	South Dakota.....	320.00	(3)	(3)
George Washington Birthplace.....	Virginia.....	393.68	23,413	52,429
Gila Cliff Dwellings.....	New Mexico.....	160.00	(3)	330
Glacier Bay.....	Alaska.....	2,297,456.27	(3)	(3)
Grand Canyon.....	Arizona.....	196,051.00	46	(2) 324
Gran Quivira.....	New Mexico.....	450.94	1,131	2,974
Great Sand Dunes.....	Colorado.....	36,609.19	6,121	11,171
Holy Cross.....	do.....	1,392.00	(3)	(1)
Homestead.....	Nebraska.....	162.73	139	(1)
Hovenweep.....	Utah, Colorado.....	299.34	132	299
Jackson Hole.....	Wyoming.....	173,064.62	(3)	(3)
Jewel Cave.....	South Dakota.....	1,274.56	1,748	4,901
Joshua Tree.....	California.....	655,961.33	35,040	(1)
Katmai.....	Alaska.....	2,697,590.00	(3)	(3)
Lava Beds.....	California.....	45,867.56	23,325	34,659
Lehman Caves.....	Nevada.....	640.00	2,402	(1)
Meriwether Lewis.....	Tennessee.....	300.00	7,552	21,281
Montezuma Castle.....	Arizona.....	521.41	11,077	9,435
Mound City Group.....	Ohio.....	57.00	(3)	(3)
Muir Woods.....	California.....	424.56	222,471	133,517
Natural Bridges.....	Utah.....	2,649.70	413	618
Navajo.....	Arizona.....	360.00	351	566
Ocmulgee.....	Georgia.....	683.48	32,196	63,330
Old Kasaan.....	Alaska.....	38.00	(3)	(2)

See footnotes at end of table.

TABLE 1.—National Park System, travel and area data, June 30, 1946—Continued

Areas (classification)	State	Federal land acres	Approximate visitors, fiscal year July 1, 1945–June 30, 1946	Approximate visitors, travel year Oct. 1, 1946–Sept. 30, 1941
NATIONAL MONUMENTS—con.				
Oregon Caves.....	Oregon.....	480.00	29,626	57,704
Organ Pipe Cactus.....	Arizona.....	328,161.73	75,484	9,780
Perry's Victory.....	Ohio.....	14.25	35,740	41,956
Petrified Forest.....	Arizona.....	85,303.63	199,390	240,967
Pinnacles.....	California.....	12,817.77	14,097	28,036
Pipe Spring.....	Arizona.....	40.00	1,046	1,914
Pipestone.....	Minnesota.....	115.60	3,889	2,785
Rainbow Bridge.....	Utah.....	160.00	(3)	367
Saguaro.....	Arizona.....	53,669.24	15,585	15,167
Santa Rosa Island.....	Florida.....	4,800.00	416,459	405,968
Scotts Bluff.....	Nebraska.....	2,196.44	43,842	80,206
Shoshone Cavern.....	Wyoming.....	212.37	(3)	(3)
Sitka.....	Alaska.....	57.00	3,987	9,151
Statute of Liberty.....	New York.....	10.38	529,140	446,364
Sunset Crater.....	Arizona.....	3,040.00	6,773	12,944
Timpanogos Cave.....	Utah.....	250.00	40,128	10,864
Tonto.....	Arizona.....	1,120.00	11,367	9,423
Tumacacori.....	do.....	10.00	17,014	8,912
Tuzigoot.....	do.....	42.67	8,708	9,350
Verendrye.....	North Dakota.....	253.04	(3)	(3)
Walnut Canyon.....	Arizona.....	1,641.62	15,804	12,623
Wheeler.....	Colorado.....	300.00	(3)	(3)
White Sands.....	New Mexico.....	140,247.04	72,345	79,069
Whitman.....	Washington.....	45.84	(3)	(3)
Wupatki.....	Arizona.....	34,693.03	2,349	4,153
Yucca House.....	Colorado.....	9.60	47	72
Zion.....	Utah.....	33,920.75	(3)	(3)
Total.....		9,283,794.34	3,016,528	3,749,452
NATIONAL MILITARY PARKS				
Chickamauga and Chattanooga.....	Georgia, Tennessee.....	8,146.33	206,050	371,616
Fort Donelson.....	Tennessee.....	102.54	18,885	41,908
Fredericksburg and Spotsylvania.....	Virginia.....	2,420.15	66,271	156,038
Gettysburg.....	Pennsylvania.....	2,463.46	397,259	654,411
Guilford Court House.....	North Carolina.....	148.83	30,098	53,203
Kings Mountain.....	South Carolina.....	4,012.00	26,601	24,442
Moores Creek.....	North Carolina.....	30.00	4,343	4,458
Petersburg.....	Virginia.....	1,324.62	147,413	263,169
Shiloh.....	Tennessee.....	3,717.59	157,894	233,439
Stones River.....	do.....	323.86	28,143	6,542
Vicksburg.....	Mississippi.....	1,323.56	14,654	212,154
Total.....		24,012.94	1,097,611	2,021,380
NATIONAL HISTORIC SITES				
Atlanta Campaign Markers.....	Georgia.....	20.96	(3)	(3)
Federal Hall Memorial.....	New York.....	.49	68,175	(3)
Fort Raleigh.....	North Carolina.....	16.45	24,882	76,016
Home of Franklin D. Roosevelt.....	New York.....	33.23	113,772	(1)
Hopewell Village.....	Pennsylvania.....	6,197.00	63,946	85,562
Jefferson National Expansion Memorial.....	Missouri.....	82.58	33,940	(3)
Manassas Battlefield Park.....	Virginia.....	1,604.57	7,104	7,735
Old Philadelphia Custom House.....	Pennsylvania.....	.79	27,238	(3)
Salem Maritime.....	Massachusetts.....	8.61	6,714	7,172
Vanderbilt Mansion.....	New York.....	211.65	26,426	17,669
Total.....		8,176.33	372,197	194,154
NATIONAL BATTLEFIELD SITES				
Antietam.....	Maryland.....	183.32	26,056	32,165
Brice Cross Roads.....	Mississippi.....	1.00	(3)	(1)
Cowpens.....	South Carolina.....	1.00	407	(3)
Fort Necessity.....	Pennsylvania.....	2.00	57,968	81,803
Kennesaw Mountain.....	Georgia.....	60.00	25,139	14,450
Tupelo.....	Mississippi.....	1.00	(3)	(1)
White Plains.....	New York.....		(3)	(3)
Total.....		248.32	109,570	138,618
NATIONAL BATTLEFIELD PARKS				
Richmond.....	Virginia.....	684.44	17,035	(1)

See footnotes at end of table.

TABLE 1.—*National Park System, travel and area data, June 30, 1946—Continued*

Areas (classification)	State	Federal land acres	Approximate visitors, fiscal year July 1, 1945–June 30, 1946	Approximate visitors, travel year Oct. 1, 1940–Sept. 30, 1941
NATIONAL MEMORIALS				
House Where Lincoln Died.....	District of Columbia.....	.05	66,226	32,883
Kill Devil Hill.....	North Carolina.....	314.40	20,461	84,194
Lee Mansion.....	Virginia.....	.50	304,433	358,791
Lincoln Memorial.....	District of Columbia.....	.61	681,932	1,796,752
Lincoln Museum.....	do.....	.18	106,335	52,541
Mount Rushmore.....	South Dakota.....	1,686.40	147,520	(1)
New Echota Marker.....	Georgia.....	.92	(3)	(1)
Thomas Jefferson.....	District of Columbia.....	1.20	661,508	(1)
Washington Monument.....	do.....	.37	751,382	939,458
Total.....		2,004.63	2,739,797	3,670,619
NATIONAL CEMETERIES				
Antietam ⁵	Maryland.....	11.36	(3)	
Battleground.....	District of Columbia.....	1.03	2,700	(1)
Fort Donelson ⁵	Tennessee.....	15.34	(3)	
Fredericksburg ⁵	Virginia.....	12.00	(2)	
Gettysburg ⁵	Pennsylvania.....	15.55	(3)	
Poplar Grove ⁵	Virginia.....	8.72	(3)	
Shiloh ⁵	Tennessee.....	10.25	(3)	
Stones River ⁵	do.....	20.09	(3)	
Vicksburg ⁵	Mississippi.....	119.76	(3)	
Yorktown ⁵	Virginia.....	2.91	(3)	
Total.....		217.01	2,700	5,000
NATIONAL CAPITAL PARKS				
The Park System of the District of Columbia.	District of Columbia, Maryland, and Virginia.	27,790.36	(3)	(3)
PARKWAYS				
Blue Ridge.....	North Carolina, Virginia.	38,911.50	683,959	965,507
George Washington Memorial.....	Virginia.....	2,458.68	(3)	(3)
Natchez Trace.....	Tennessee, Alabama, Mississippi.	13,648.87	(3)	(3)
Total.....		55,019.05	683,959	965,507
Total—National Park System.		20,472,562.46	15,083,194	20,139,589
NATIONAL RECREATIONAL AREAS				
Boulder Dam.....	Arizona–Nevada.....	1,680,133.33	992,397	838,246
Lake Texoma.....	Texas–Oklahoma.....		(3)	(3)
Shasta Dam.....	California.....		(3)	(3)
Millerton.....	do.....		(3)	(3)
Total.....			992,397	838,246
PROJECTS ⁶				
Saratoga National Historical Park.	New York.....	1,864.60	19,243	(1)
Kennesaw Mountain National Battlefield Park.	Georgia.....	3,034.21	(3)	(3)
Cape Hatteras National Seashore RA.	North Carolina.....	74.00	(3)	(3)
Olympic Public Works project...	Washington.....	43,359.36	(3)	(3)
Total.....		48,332.17	19,243	72,591
Grand total.....		22,201,027.96	16,094,834	21,050,426

¹ Not established in 1941.² Estimated.³ Travel figures not available or maintained.⁴ Closed to visitors.⁵ Included in travel figures for adjacent battlefield site, military park, or historical park.⁶ Includes only those in which lands are under National Park Service administration.

ANNUAL REPORT
of the DIRECTOR
NATIONAL PARK SERVICE
to the
SECRETARY OF THE INTERIOR



Reprinted from the
ANNUAL REPORT OF THE SECRETARY
OF THE INTERIOR

For the Fiscal Year Ended June 30, 1947

Fiscal Year Ended June 30

1947



The National Park Service

NEWTON B. DRURY, DIRECTOR

“ . . . to save from destruction the wild beauty of America”—*John Muir*

THE fiscal year which ended on June 30, 1947, was, in some respects, a red-letter period for the National Park Service and for the great system it administers. A part of Florida's semitropical Everglades became the Everglades National Park; an appropriation of \$200,000 was approved by both House and Senate for a start on the Service's program of acquiring private and non-Federal lands within the boundaries of park areas; the establishment of the Concessions Advisory Group launched a thoroughgoing study of the whole concessions system; the extent and effectiveness of the Service's cooperation with other agencies, Federal and State, have steadily increased; a start has been made on the repair and rehabilitation of structures and facilities, though appropriations for the purpose have not been equal to the need; and the popularity of the parks and monuments has reached a new high.

On the opposite side of the ledger must be placed the serious insufficiency of funds for adequate field or central office staffs or vitally needed developments; renewed threats to Olympic National Park and Jackson Hole National Monument; and the serious inadequacy of visitor accommodations of all kinds.

There are two facts which stand out in any review of the year. The first is the tremendous influx of visitors to the National Park System, which reached a record total of 21,682,782 in the travel year that ended on September 30, 1946, and which appears certain to exceed 25,000,000 during the present travel year.

On the whole, we believe that these visitors have been satisfied. To many the year brought a renewal of prewar experience; to thousands of others it brought, for the first time, acquaintance with the finest examples of the American natural scene and with those historic places where American enterprise and patriotism have flowered most gloriously.

The second outstanding fact is that neither the physical plant—Government or concessioner—nor the staffs, either in central offices or

in the field, were adequate to meet the responsibilities greatly enlarged both by the addition of new areas and the increase in visitors.

Mount Rainier for example.—The situation at Mount Rainier National Park is typical. At this writing it seems not at all unlikely that visitors to the park during the current travel year will exceed 1,000,000. The amount of public accommodation is materially below that available before the war; almost all of what remains is obsolete or obsolescent and none too safe.

The park contains 80 miles of highway. Much of it is in various stages of disrepair; the West Side Road is rapidly deteriorating while part of the Carbon River Road is, in the words of the superintendent, "rapidly going back to its natural state." Hundreds of thousands of dollars were expended before the war on the Stevens Canyon Road to connect the Paradise Valley Road with the southeast corner of the park, but it will require close to a million dollars to complete. Not a mile of new road has been opened to the public in this park since 1940.

All public camp grounds require extensive improvements. Housing which must be provided within the park for Service employees, is still inadequate, though temporary relief has been provided by conversion of a mess hall at Longmire into apartments, and others will be developed in prefabricated barracks obtained from surplus—a type of construction wholly unsuitable in a national park.

The staff at Mount Rainier National Park, handling twice as many visitors as it did before the war, is actually smaller than it was in 1940, the record prewar year. Meantime, the 40-hour week has reduced worktime by one-sixth; protection at one-man posts such as remote ranger stations must perforce be limited to 5 days a week.

Situation duplicated in many areas.—The situation at Mount Rainier has been thus covered in detail in order to provide a vivid and concrete picture of a typical situation in the National Park System. Conditions in this park are duplicated in many respects in most of the others, where increased use has not been matched by increases in staff or in public accommodation; where, in fact, there have as a rule been actual decreases in both respects, along with deterioration in both public and administrative facilities.

Travel to Mesa Verde National Park, just before and just after World War II, was more than twice what it was during the early thirties, yet the staff of seasonal and permanent employees available for protection of prehistoric ruins and for conducting guided trips is considerably smaller now. At Zion and Bryce Canyon National Parks virtually all the time of the ranger force is required during months of the year to operate the two checking stations—and then on such a limited basis that considerable revenue in automobile fee

must go uncollected. At Petrified Forest National Monument, all staff members took turns at janitorial duties in public rest rooms and museums; rangers on checking stations performed duties singly, where formerly, for fewer visitors, two were employed. With no relief, contact rangers frequently talked almost continuously for 8 hours, and could not speak above a whisper at the end of the day!

At Glacier National Park, all members of the permanent ranger staff, as well as other employees, have voluntarily worked many extra hours to provide protection to the park and service to the public. Accidents to employees have increased one-third, with a 200 percent increase in time lost. The superintendent declares that this "is largely due to overload of work. Two accidents resulting in long periods of time lost were caused by working under pressure. * * * Poor planning and improper equipment have been contributing factors, but this is traceable to pressure of work that did not allow time for making alterations or repairs to eliminate hazards."

"Every branch of this administrative unit is understaffed and every branch head, with his various assistants, has more duties than he can possibly perform," the superintendent of Big Bend National Park reports. "All we can do is try to select the more important problems and delay action on those that appear minor in nature. * * * A chief ranger and three rangers cannot keep control over everything in a 700,000-acre tract, especially when there are no checking stations and the boundary is not fenced."

At Death Valley National Monument in California, the heavy travel (46 percent above the highest previous years) put a heavy strain on the protective and educational forces. On 3 days each week only one ranger was available, and on 4 days there were two. With approximately 500 miles of road to patrol in this 1,850,565-acre monument, justice could not be done to wildlife protection, janitor work in the heavily used camp ground, roadside clean-up and many other duties. The entire road system is depreciating rapidly," says the superintendent, "and with no major rehabilitation possible for several years, the problem is rapidly getting out of hand."

Throughout the National Park System public accommodation is provided, with relatively few exceptions, by private capital, invested in hotels, lodges, cabins, restaurants, cafeterias, lunch counters and stores, operated under contract with, and subject to regulation by, the Federal Government. Difficulties in obtaining materials and skilled labor for the repair of facilities which deteriorated during the war in some cases prevented the placing of such facilities in service; during 1946, difficulties of obtaining competent help and of retaining it, kept other usable facilities idle. Investment in new facilities has been almost completely lacking because of uncertainties as to the terms of new

concession contracts, held in abeyance pending report by the Concessions Advisory Group, referred to later.

To curb the careless and the vandalistic; to provide protection to the visitor and the modest degree of interpretation which contributes so much to his enjoyment; to safeguard invaluable natural and historical resources "unimpaired for the enjoyment of future generations"—to perform these functions with even fair adequacy is utterly impossible under existing circumstances. That it is done as well as it is shows a devotion to duty on the part of both field and central office personnel that is beyond praise. It is bound sooner or later, however, to affect the health and the capacity for accomplishment of those who, for weeks on end, give their Government 6 and 7 days of service for 5 days' pay because they can see no other way in which the requirements of law and their own consciences can be met.

The 40-hour week, in its universal application within the Federal Government, has produced great difficulties for the National Park Service. These difficulties are not insuperable, but they cannot be surmounted without frankly recognizing the extra costs entailed. There is needed a considerable degree of flexibility in the authorization of a longer work week. Sufficient funds are needed to defray the costs of fully justified overtime. This is not recognized in current appropriations. When the District Ranger at Mount Rainier, alone at his station, takes his permissible 2 days per week off, the lands and properties he is expected to guard simply go unguarded; when 5-days-a-week employment has to compete with 6-days-a-week private employment at the same daily wage, there is no choice but to pay time-and-a-half for the extra day of work, if employment is to be effected at all, thereby draining funds sorely needed for other purposes. When back-of-the-line services—accounting, personnel, budget, supervision of concessions, auditing, the issuance and distribution of informational publications, guidance in planning and construction, and many others—already insufficiently supplied with personnel, are compelled to undergo further decreases, the whole operation suffers; and loyal and faithful employees gird themselves to contribute further uncompensated overtime.

We cannot believe that the millions of Americans who derive enjoyment and physical and spiritual satisfaction from such possessions as the national parks wish to obtain that enjoyment and satisfaction at such a cost.

Areas suffer from overuse and vandalism.—The properties which the National Park Service is charged with safeguarding and protecting suffer in two different ways as a result of insufficient protective staffs and of inadequate developments. Where, for example, the demand for camping space exceeds the supply, it must either overflow into

space not designed for such use or overcrowd the available developed camp grounds. In either case, vegetation is subjected to excessive wear with no chance to recover. In a score of ways, use which is legitimate and desirable but beyond capacity, damages both natural features and man-made facilities.

Insufficient protection, on the other hand, is an open invitation to those who do not respect the property of others—even when they are themselves part owners—to commit acts of carelessness or willful vandalism. Superintendents and custodians were asked specifically to comment on the incidence and character of such vandalism and to explain the volume of it where it seemed excessive. The Superintendent of Grand Teton National Park declared, "The answer to the problem lies in additional ranger personnel for patrol and informational duty, more adequate signs and less congested areas of use." His statement reflects the observations of all those who found themselves troubled by vandalism—which included the overwhelming majority.

Grand Teton reported heavy damage to comfort stations and other buildings; the burning of tables, signs, and outdoor amphitheater seats in campfires; the indiscriminate hacking of trees and shrubs—even the disappearance of the supports of the naturalist's motion-picture screen. A veteran park superintendent contends that the worst damage is done by crowds beyond the capacity of the existing facilities, particularly camp grounds, and that the effects of such overuse can be remedied only by additional developments which will allow the overused areas to recover.

Fools' names.—At Zion National Park, the writing of names and addresses on scenic features moved the superintendent to send a carefully composed letter to 20 of the writers, with excellent results. Two juvenile hoodlums, who set fire to an old CCC building at Capitol Reef National Monument, were apprehended by the FBI and confessed the crime. Their case was set for August in Federal Court. At Petrified Forest National Monument, initials, dates and pictures were scratched over prehistoric Indian pictures at Newspaper Rock. This point was formerly patrolled by a guide, whose services it has not been possible to provide since the end of the war.

At Crater Lake National Park the superintendent reports bottles beside and on roads, scattered papers, film cartons, and camp refuse "with a total disregard of sanitation, cleanliness, and consideration of the person who came after them."

Injuries to rare plants are among the more destructive forms of vandalism reported from Hawaii National Park. "Damage will continue," writes the superintendent, "as long as our ranger ceiling remains at its present level."

Exhibits destroyed.—At Grand Canyon, one of three cases at the Colorado River trailside exhibit was completely wrecked. The large plate-glass cover, carried down into the canyon by CCC manpower in prewar days because it was too large for muleback transportation, was destroyed, and the exhibit materials were destroyed or carried away. Binoculars at Yavapai observation station have been badly damaged, and various exhibits there have been destroyed or stolen.

"Much if not all of this wanton destruction at Yavapai could be prevented," Superintendent Bryant asserts, "if sufficient personnel were available to have someone on duty at this station during daylight hours."

Damage to and theft or destruction of exhibits were reported from many areas. Yellowstone National Park, with an overwhelming influx of visitors that will approach 1,000,000 this year, suffers from all the common forms of vandalism and has several serious types peculiar to it. Perhaps the worst is the throwing of rocks and all manner of trash into the hot springs, often in such volume as to impede or block the flow of the waters; with the scratching of names and initials in the delicate formations around the springs a close second.

The discouraging feature of so much of this vandalism is that evidence of it prompts others to follow suit, and there are not enough employees to remove trash or eliminate carved names promptly.

The gloomy picture presented by the above examples leads to but one conclusion: Unless adequate forces are provided for patrol and the enforcement of regulations, the valuable and irreplaceable properties of the people in the national parks will undergo steady deterioration, and the areas will gradually lose their greatness and their beauty.

Appropriations for 1948.—Difficulties of operation during the year just ended, and the insufficiency of personnel at all levels, are likely to increase rather than diminish during the fiscal year 1948, except for a degree of relief to the 28 national parks, which received an appropriation of \$3,565,000. This represents an increase, after deducting non-recurring items, of \$239,925 over the 1947 amount. Funds for the Director's office were reduced by \$84,000 and for the four regional offices by \$72,000. For the national monuments, historical and military areas there was an increase of \$12,349, plus supplemental items for the newly established Theodore Roosevelt National Memorial Park and for certain improvements at Mount Rushmore National Memorial.

Reductions are actually greater and increases materially less than the dollar figures indicate, since the costs of wages, materials, and equipment are considerably higher than the average for the 1947 fiscal year.

The budget item of \$5,000,000 for roads and trails and physical improvements was reduced to \$2,150,000—\$350,000 less than the engineers' estimate of the cost of road and trail maintenance alone.

Sum of \$200,000 appropriated for land purchases.—Perhaps the most significant item and certainly one of the most encouraging, in the 1948 appropriation, was one of \$200,000 for the purchase of lands.

Although it would take considerably more than 100 years to buy up the non-Federal lands within the parks and monuments at the rate of \$200,000 a year, still this modest sum will make possible the acquisition of a few key properties which block either effective control or satisfactory development as long as they are in private hands. Valuable as these results may be, however, the real significance lies in the fact that the Congress has recognized the necessity of launching a program to consolidate Federal ownership within Service areas. It is hoped, however, that in future years, acquisition may proceed at a greatly accelerated rate, since delay has resulted already in a disheartening increase in land values and in developments which have greatly added to the ultimate purchase cost and injured the parks.

Publications program limited.—To meet the needs of inquirers and visitors, the National Park Service should issue some 6,000,000 pieces of free informational literature each year. Funds for 1947 were sufficient to produce barely one-half that amount. Increases in printing costs during the year, with no increase in printing funds for 1948, will compel a still further decrease in the quantity produced this year, even though many items are being reduced in size. The backlog of special publications, prepared at considerable cost to the Government, and unproductive until they can be printed, cannot be touched.

RECREATIONAL AREAS LAG IN DEVELOPMENT

To the group of impounded lakes on which recreational use is managed by the National Park Service for another Federal agency, Franklin D. Roosevelt Lake, created by the Grand Coulee Dam, was added during the past year. The extent of responsibility involved in the development and management of the recreational areas is indicated by the 1,171,736 visitors to the Lake Mead (formerly Boulder Dam) Recreational Area during the last travel year and by a recent estimate of the supervisor at Lake Texoma that the total recreation-use visitation there this year will be as much as 650,000.

Each of these areas presents pressing problems of safe and adequate water supply, proper sanitary facilities, adequate camping facilities, water-front structures, roads, trails, concession contracts, water patrol, lifeguard service and, in general, the provision of competent and sufficient staffs to control public use and to assure proper protection of

the public. The task is complicated on most of them by the fact that public land ownership around the shores of the lakes bears no logical relationship to the needs of recreation seekers, and by the fact that public demand for use, and actual public use, does not wait the orderly process of development with limited funds, and thereby complicates both the developmental and administrative tasks of the Service. Many persons, ignorant alike of the cost of adequate development and satisfactory management and of the paucity of funds available for these purposes, are likely to pass unflattering judgment on the kind of job performed by the National Park Service at these places.

CONSTRUCTION LIMITATIONS SLOW NEEDED DEVELOPMENTS

The National Park Service embarked upon the fiscal year 1947 expecting to launch as quickly as possible, and to accomplish as rapidly as possible, a program of physical improvements, parkway, road and trail construction, and repair and rehabilitation. It was sorely needed. For 5 years there had been no new construction and only inadequate maintenance of structures and utilities throughout the entire park system. Before the program could be fairly started, however, executive limitations on Federal construction, in the interests of the housing program, compelled the deferment of most park construction until last spring. Not only did this prevent work that would have been of service during the season of travel; during the period of delay, already high construction costs continued to soar still higher.

Appropriations for 1947 amounted to \$11,000,000 for parkway construction and operation; \$6,000,000 for the construction and maintenance of roads and trails; and \$1,330,000 for the construction, repair and rehabilitation of buildings and utilities. With the removal of restrictions in the spring, every effort was made to expedite the letting of contracts and to initiate work on several day-labor projects. The end of the fiscal year brought this meager record of accomplishment:

For the entire National Park System only one road contract, for approximately 5 miles of bituminous surfacing, costing \$48,619, was completed in the fiscal year 1947. Two day-labor projects, to cost \$69,100, were started. Four contracts, for a total cost of \$627,972, were awarded. However, on one contract for which bids were invited, the low bid of \$36,566 was nearly 60 percent in excess of the estimate and was rejected; on three other invitations, for work at an estimated cost of \$458,342, no bids were received.

Parkway bids far exceed estimates.—For the parkways—Blue Ridge, Natchez Trace, and George Washington Memorial, the record is not materially different. At the beginning of the fiscal year, one contract

of \$423,342 was under way on the Blue Ridge Parkway. Four additional parkway contracts were let for a total of \$1,419,863. Seven additional invitations were issued, of which the award of one, at an estimated cost of \$118,000, was pending at the end of the fiscal year. The engineers' estimate of cost for the other six was \$904,982. The sum of the lowest bids was \$1,155,250.50, more than 27 percent above the estimates. All were rejected.

Because of unexpended balances remaining from the 1947 appropriation the President's budget recommended only \$1,000,000 additional for highway construction and reconstruction in 1948, together with \$2,500,000 for repair and maintenance, and no additional appropriation for parkways. However, the appropriations as finally approved provided only \$1,415,000 in new funds for construction, repair, and maintenance of roads and trails. It is therefore necessary this year to utilize more than \$1,000,000 from last year's construction balances for repair and maintenance, as this work cannot be done for less than \$2,500,000 per year, thus reducing by \$1,000,000 the year's program of construction.

Rehabilitation and deferred maintenance just begun.—Coming out of the war period with a heavy load of deferred maintenance and repair of structures and utilities and extremely pressing need of a large amount of new construction, the Service received for all these purposes a 1947 appropriation of \$1,330,000. It was compelled to defer the expenditure of much of this because of the August 6, 1946, order already referred to. Though not sufficient to permit more than a start on repair and rehabilitation, this appropriation has permitted the initiation of much work that was vital—the rehabilitation of camp grounds, repair of water and sewer lines and other utilities, painting and repair of structures, and a great variety of other jobs necessary in the interest of public health and safety. The budget request for \$1,500,000 for these same purposes for this year was reduced by Congress to \$735,000. In consequence, further repair and rehabilitation and further provision of needed structures—particularly employee housing in locations where provision for it with public funds is an inescapable obligation—must proceed at a proportionately slower pace.

SYSTEM NEEDS LARGE IMPROVEMENT PROGRAM

"In the National Parks," writes Superintendent John R. White of Sequoia and Kings Canyon National Parks, "we have always been in the position of engineers compelled to dam a stream in flood without opportunity to divert the flood waters."

Never have the inadequacies of development of the National Park System been so highlighted as during the travel seasons of 1946 and

1947, which have brought such tremendous increases in numbers of visitors. Camp grounds, poorly equipped and crowded far beyond the capacities for which they were planned; road systems in need of thorough overhauling and extension; utilities which were more than adequate 15 years ago, but pitifully inadequate for present demand; hotel and lodge and cabin accommodations vastly in need of enlargement and modernization—these are some of the conditions which visitors this year and last have noted and on which many of them have commented in terms of bitter complaint. In fairness it should be stated that these criticisms cannot be met until the Government is in a position to provide funds commensurate with the manifest needs.

The National Park Service's objective, often stated, is to make such provision for the public enjoyment of the areas it administers as can be supplied without serious impairment of their natural or historic features. Careful and competent studies of physical development requirements reveal that the foreseeable needs of the system, as now constituted, call for the expenditure of \$98,000,000 for physical improvements, including what are generally referred to as concession facilities; \$110,000,000 for the extension and modernization of roads and trails systems; and \$120,000,000 for the completion of parkways already authorized.

The Service could utilize effectively as much as \$15,000,000 a year for each of these items, for at least 7 years.

Larger appropriations promote economical expenditure.—Aside from the fact that sums greatly in excess of those provided during the past 2 years are needed in order to bring developments in line with existing needs, larger scale appropriations would mean economy in the long run. They would permit the completion of whole projects in a single operation, instead of prolonging them over several years. The larger contracts thereby made possible would result in a lowering of costs below those obtainable when several segments of a project have to be covered by as many contracts.

An indication of the volume of construction now needed, or that is certain to be needed before it could be provided even if funds are available on the scale suggested above, is shown by such facts as these:

There is, throughout the National Park Service, an acute shortage of housing for employees. It is estimated that 600 dwelling units, costing at least \$8,000,000, will be required to alleviate this condition. Great Smoky Mountains, Mammoth Cave, Shenandoah, Rocky Mountain, Glacier, Big Bend, Mesa Verde, Hawaii, Sequoia-Kings Canyon, Everglades, and Mount Rainier National Parks; Badlands National Monument; and Lake Mead and Lake Texoma Recreational Areas—to name only a few—all are in critical need of additional housing which cannot be provided satisfactorily in any other manner than by public

construction. Many other types of shortages will have to be met before the Service can perform the functions properly expected of it.

How to provide public accommodations.—With greatly enlarged demand for additional lodging and dining accommodations at many areas in the system, on the one hand, and, on the other hand, a growing hesitancy on the part of owners of capital to invest it in providing these facilities, the Service is forced to consider a program of constructing them with public funds, for operation by either private corporations or nonprofit-distributing agencies. The needs of largely undeveloped areas such as Big Bend, Olympic, and Isle Royale National Parks are urgent. The time is not far distant when the new Everglades National Park will face the same problem. In established areas such as Yellowstone, Yosemite, Mount Rainier, and Mammoth Cave National Parks, mounting travel makes the need no less urgent. To provide adequately for visitors, new construction of this type that would cost some \$10,000,000 would be needed for the system as a whole, if it were the policy of the Government to undertake it. Exclusive of what might be needed to carry out a policy of Government ownership of public accommodations, the provision of other needed physical improvements would require nearly \$80,000,000. At the Statue of Liberty, for example, where conditions have resulted in much criticism by New York newspapers and by many individuals and organizations, the satisfactory development of this American shrine, in order to give it a proper setting and take care of the public properly, would require the expenditure of more than \$1,100,000. Developments for a well-rounded use of Great Smoky Mountains National Park and to meet present justified criticisms of lack of balance, call for expenditures of more than \$1,200,000. At long-established Grand Canyon, projected developments to meet the vastly increased visitor load will cost nearly \$600,000. Examples such as these could be presented for a large number of areas in the system, where existing plants are obsolete or obsolescent, as well as totally inadequate for a visitor load several times that for which they were originally planned. There have been almost no major developments in any of the parks for the past 15 years. Fifteen years ago, visitors to the then 22 national parks totaled approximately 3,000,000; for the present travel year, in 27 national parks, it will approach or exceed 11,000,000. Comparison of those two figures alone seems to us to prove the necessity of a large-scale, long-range program of physical improvements, which would be matched by a program of modernization of highway systems and their extension where there is proved need of it.

Plans in readiness for start.—The readiness of the Service to embark on needed construction programs is indicated by the fact that plans have been prepared for physical improvement projects estimated to

cost \$5,200,000. Plans and surveys for various minor roads and trails projects to cost \$1,100,000 are available.

The Public Roads Administration has completed plans, surveys, and estimates on a total of \$4,151,000 worth of major roads projects, while similar work on projects to cost approximately \$8,000,000 additional are in various stages of completion. The same agency has completed, or nearly completed, similar preparation for the construction of \$21,007,600 of future parkway road projects.

ADVISORY GROUP STUDYING CONCESSIONS

The complexities of the national park concessions problem were discussed at some length in last year's report. At the Service's suggestion, Secretary Krug last fall appointed a Concessions Advisory Group of five persons, to study the whole field of concessions operations and to formulate recommendations, with respect to all phases of them, designed to assure satisfactory service to the public, a reasonable return to the Government, and a reasonable profit on investment.

In their report on the 1947 Interior Department appropriation, the Appropriations Committee of the House of Representatives commented unfavorably on national park concession operations and demanded that the Service make a study designed to effect improvements. In its report on the 1948 appropriation act the committee criticized the enlistment of an outside group to undertake the task. The report was insistent that, with respect to concession services, (*a*) prices be decreased, (*b*) the Treasury receive a greater return and (*c*) concessions "monopolies" in the parks be brought to an end.

It was explained to the committee that, as one of the principal parties concerned, the Service could not, even if personnel were available for it, handle such a study in the dispassionate fashion that the situation demands if the conclusions and recommendations are to carry the necessary weight with Congress and the public. To perform the job, Secretary Krug chose a group of persons of the highest character and specially qualified in their several fields. Mr. Clem W. Collins of Denver, who acts as chairman of the group, is a past president of the American Institute of Accountants; Mr. George D. Smith of San Francisco is a past president of the American Hotel Association; Mr. Elmer Jenkins, of Washington, D. C., heads the Touring Bureau of the American Automobile Association; Mr. Charles G. Woodbury, also of Washington, is a member of the board of both the National Parks Association and the Wilderness Society; while Mr. Charles P. Taft, of Cincinnati, nationally known for leadership in civic and religious affairs, was chosen to represent the general public, whose interests are also the primary concern of the National Park Service.

To their task, the members of the group have given the intelligent attention which was confidently expected of them when they were selected. It is hoped that they may have finished their study and made recommendations to the Secretary before the end of this calendar year. This is highly desirable in order that interested members of the Congress may have an early opportunity to study the concessions policy proposed by the Secretary as a result of the report. An equally compelling reason is that a number of existing concession contracts expire at the end of the year or have already expired and have been extended to December 31. Meantime, uncertain as to the terms under which they are to be permitted to operate, most of the concessioners are refraining from further large investment even though there is great need both for additional accommodations and for major rehabilitation of existing facilities. Seldom in the history of the National Park Service has the need for decision as to future policy and procedure been more urgent.

Meantime, the Service recognizes the desirability both of lower rates to the public and of greater return to the Treasury if they are attainable; it awaits, with fully as much interest as do the members of the House Appropriations Committee, the advisory group's conclusions.

Demands on concessioners increase.—As has been indicated elsewhere, the greatly increased travel has brought with it a comparable increase in the demand for accommodations and services of all kinds. Because of shortages in labor, materials, supplies, and equipment, the concessioners were unable to render complete service, but it was, on the whole, satisfactory, and complaints were relatively few. As rapidly as they can, they are rehabilitating and effecting minor expansion of their facilities.

Heavy demand in a number of park areas made it necessary to authorize limits of 3 to 5 days in the stay of visitors at any one location. Such action was optional on the part of the concessioners when concurred in by the superintendent.

Audits lag.—Because of insufficient personnel and operating funds, the number of unaudited annual reports of concessioners increased from 513 to 565 during the year; 185 were received and only 133 were audited. The increase in number of concessioners and the addition of new areas have increased every phase of the work of the Branch of Concessions. These factors and the reduction in funds for audit, inspection, and contract negotiations have almost immobilized the branch, limiting activities mainly to office work.

Concession employees.—To preserve the wholesome atmosphere of service engendered by the use of nonprofessional help and to protect the worker are the objectives of new regulations governing the hours of labor and the wages of national park concession employees which

are now being formulated. These will provide for basic rates of pay and a salary rate for each classification; overtime and holiday pay rates; employee benefits as to vacations, promotions, and seniority; satisfactory working and living conditions; and methods of determining the value of meals and lodgings for employees. They will also establish a labor review committee.

EARNINGS AT RECORD FIGURE

The earnings of the National Park System from all sources, during the 1947 fiscal year, amounted to \$2,982,205, establishing a new record. By far the largest single source of revenue was the automobile fee, producing \$1,594,080; other fees produced \$781,249. Receipts from concession operations amounted to \$265,023, much above any previous year.

In a number of parks, income materially exceeds operation expenditures. Visitors who realize that large sums are being collected in fees of one kind or another, are frequently puzzled because these funds are not utilized to provide adequate personnel and to keep the physical plant in better shape. Many doubtless assume the Service is failing to make effective use of its funds. To those who ask, it is possible to explain that all receipts go into miscellaneous receipts in the United States Treasury and that the National Park Service must depend wholly on funds appropriated by the Congress.

It should perhaps be emphasized that, though income amounts to a respectable sum, the costs of operation of the National Park System far exceed it. There are doubtless acceptable methods by which income might be increased. Any effort to make it cover even operation costs, however, could succeed, we believe, only by introducing activities and facilities wholly incompatible with the basic purposes of the system. The present fee system contains inequities that need to be adjusted; the Service's study of fees is nearing completion and recommendations for changes are expected to be formulated before the end of the year.

The fact that, almost alone among the Federal land-administering agencies, the National Park Service is not permitted to share its income with the States for the benefit of the counties, continues to place it at a disadvantage in its local relationships. This is perhaps the most important reason for the frequent local opposition to the establishment of new areas in the system, or the extension of those already established.

PLANNING, PROTECTION, AND USE

Everglades National Park.—The family of national parks was increased to 28 on June 20, 1947. On that date, Secretary Krug,

accepting various conveyances from the State of Florida, and a check for \$2,000,000, appropriated for land acquisition by the Florida Legislature, signed a formal proclamation of establishment of the Everglades National Park, containing a gross area of approximately 464,000 acres. Of this total, 270,000 acres are in Federal ownership, free of all reservations and encumbrances.

The brief ceremonies of June 20 were the major result of the well-directed efforts of the Everglades National Park Commission, reactivated by Governor Caldwell last year. As a result of its work, the Florida Legislature gave overwhelming support to all measures needed to assure establishment of the park. That the project did not die long ago is due largely to the continued, persistent missionary work of Ernest F. Coe, and of the Everglades National Park Association. That so much in the way of animal and bird life worth saving remains in the Everglades is largely owed to the courageous protection given it by the National Association of Audubon Societies, which cost the lives of two of its wardens.

United States Senator Spessard L. Holland, who as Governor had strongly supported the park project, has continued as an active advocate of it in the Congress.

The park being still far from complete, the first need is congressional authorization to extend it to approximately three times its present gross area, with as rapid acquisition as possible within the enlarged authorization. Much of the area has been extensively modified in one way or another and the process of restoration to something as close as possible to its original condition will be slow. Development plans are in the making, but the National Park Service, dealing with a type of terrain and biological features easily susceptible to injury or modification, proposes to move with caution in providing for public access and use. Particularly is this true of the rookeries and bird colonies that are one of the unique and fascinating features of the Everglades. It takes time to plan for public enjoyment of such spectacles and yet avoid disturbances that would destroy the very thing that the public seeks to enjoy. The people of Florida, although eager to have the park become a major tourist attraction, are sympathetic with this problem.

Cooperative planning program.—The cooperation rendered by the National Park Service to other Federal agencies and to the States was greatly extended during the year. Funds transferred by the Corps of Engineers and the Bureau of Reclamation enabled the Service to advance considerably the program of investigating recreational potentialities connected with the development of reservoirs for flood control, irrigation and power generation. In these studies an important concern of the Service is to recognize potential damage to national and State Park areas and, in making its recommendations, to

consider whether the public interest is better served by the development of certain engineering works or by the preservation of existing recreational areas, outstanding natural scenery, and antiquities.

Missouri River Basin.—Funds available during the year were sufficient to permit the expansion of the Missouri Basin program to embrace 12 individual reservoir projects, and two subbasin reconnaissance surveys covering an additional 21 reservoirs. Funds were also assigned to the Smithsonian Institution to speed progress on archeological and paleontological investigations.

Bureau of Reclamation projects.—The report on the comprehensive survey of the recreational resources of the Colorado River Basin, begun in 1941, has been completed and will be published after review by interested agencies.

Seven agreements with the Bureau of Reclamation provide for an advance of funds to the Service for investigation of 128 existing and proposed projects and reservoir sites outside of the Missouri River Basin. Investigation of 62 sites has been made and a number of others are being examined. Archeological and paleontological features are explored and appraised by the Smithsonian Institution with funds transferred by the Service, while biological values of the sites are examined by the Fish and Wildlife Service.

Corps of Engineers projects.—Reports on recreational potentialities and recommendations for their optimum use were completed for 59 additional reservoir sites. The Smithsonian Institution conducted archeological reconnaissance surveys on nine projects and surveys are under way on six others. The Allatoona survey located 206 archeological sites, of which 10 are recommended for partial excavation, 33 others for testing. At the Buggs Island Reservoir in Virginia and North Carolina 94 sites were located. Two of these are extremely important as they appear to represent an eastern phase of the so-called Folsom Culture.

Cooperation with the States.—With most of the State park programs undergoing postwar expansion, the National Park Service was called on frequently to give advice on planning and development, design of structures and facilities, and administrative, maintenance, and operational problems. The Service also compiled two tabulations of State park information.

Advances in historical conservation.—Last December the Adams Mansion at Quincy, Mass., the home of four generations of the Adams family, distinguished in public service, in literature, and in intellectual life, was designated a national historic site and its administration assumed by the Service. The Theodore Roosevelt National Memorial Park, Medora, N. Dak., commemorating the activities of Theodore Roosevelt as frontiersman, rancher, and hunter, was established. Pur-

suant to the provisions of a 1946 act of Congress, the Philadelphia National Shrines Park Commission, with the assistance of Service personnel, has been making an investigation of Independence Square and its environs, in Philadelphia, to determine whether the area should be recommended for addition to the National Park System. The report of the Commission will be submitted to the Congress on January 3, 1948.

Cabrillo National Monument, closed to visitors during the war, was reopened to the public. Fort Pulaski National Monument, taken over by the Navy during the war, was being returned to the National Park Service at the end of the fiscal year. Fort McHenry National Monument and Historic Shrine, in Baltimore, occupied in part by the Navy during the war, was restored to its prewar condition. Mound City Group National Monument, administered under informal agreement by the Ohio Archeological and Historical Society since 1923, was turned over to National Park Service custody on August 1, 1946.

Fort Frederica National Monument was formerly dedicated on March 22, 1947. Secretary Krug was the speaker for the occasion.

The Jefferson National Expansion Memorial Association at St. Louis, Mo., raised \$225,000 for the purpose of holding a Nation-wide competition to obtain appropriate memorial designs that it could recommend to the Department of the Interior for use in the development of Jefferson National Expansion Memorial. Mr. George Howe has been selected as professional adviser to the association, and the first stage of the competition will be completed on October 1, 1947.

The formation of the National Council for Historic Sites and Buildings, and its subsidiary, the National Trust for Historic Preservation in the United States, on April 15, 1947, was a noteworthy event in the field of historical conservation. The Council, consisting of national organizations interested in historical preservations, was established "to further the preservation, study and interpretation, for the public benefit, of historic sites and buildings situated in the United States and its possessions and significant for American history and culture."

Protection progress.—In numerous ways, progress was made in the protection of the historical properties administered by the Service. Use of part of the \$200,000 provided for land purchases, mentioned elsewhere, will permit acquisition of certain lands threatened with commercial exploitation. Studies were instituted to determine protective measures needed in areas where public use threatens serious damage to historic structures or prehistoric remains, such as Montezuma Castle. Needed repairs were provided for some of the buildings at Appomattox Court House National Historical Monument. To relieve excessive strain on the building, an additional exit was provided

at the home of Franklin D. Roosevelt National Historic Site, and walkways are planned to protect the grounds around the home.

Protection of forests and trees.—During the 1946 calendar year 383 fires either started within or entered park areas, burning 3,731 acres of forest, brush, or grass. Man-caused fires were in a ratio of less than 1 to each 74,000 users; only 380 per million acres of hazardous area were burned. These facts reflect intense prevention, efficient control and public cooperation. The quality of seasonal fire-control personnel improved considerably over that of the war years, predominantly immature and inexperienced. Through Forest Service cooperation, smoke jumpers were used effectively on several fires in remote areas in the northern Rockies, the only region where this activity is carried on.

The care of veteran shade and ornamental trees, particularly in the historic areas administered by the Service, was necessarily neglected during the war. During the past year, a crew of expert tree workers was reestablished and newly equipped. During its period of organization and training it did essential work in eight eastern national cemeteries and historical areas.

Grazing.—With the termination of war emergency grazing permits, grazing within the National Park System has returned to a fairly normal footing. Though the animal unit month total of 110,617 for the calendar year 1946 is greater than that shown for the previous year, that is due to the fact that part of the grazing in Jackson Hole National Monument was not covered by grazing permits until 1946.

Water control projects would affect system.—Emphatic protests have been registered by the Department and by the Service against the construction by the Corps of Engineers of the proposed Mining City Dam on Green River, Ky., at a height that would cause periodic flooding of, and great damage to, Mammoth Cave. The caves and other lands now comprising Mammoth Cave National Park were a gift to the people of the Nation, largely by the State of Kentucky and its citizens. For the Federal Government to damage it through flood-control operations would be a breach of faith with the Congress, which approved park establishment, with the State and citizens of Kentucky, and with the people of the Nation, to whom the park belongs. The Secretary of War has assured the Secretary of the Interior that he will be kept informed regarding the project.

The primitive character of a portion of Glacier National Park is threatened by the proposed construction of a dam at Glacier View on the Flathead River. This proposed dam also would be exceedingly detrimental in its effects on the park wildlife, since the submerged area would encompass practically all of the present winter range of moose, elk, and whitetail deer in this section of the park.

OLYMPIC BOUNDARY QUESTION AGAIN ACUTE

Early in the first session of the Eightieth Congress, the late representative Fred Norman of Washington introduced House Joint Resolution 84, which proposes the establishment of a nine-member commission to study the boundaries of Olympic National Park and to recommend such changes in them as it might consider necessary. This resolution, asserted by some of its advocates to be a democratic approach to a solution of the question, was believed by the National Park Service to be extremely dangerous, since the local interest, rather than the national interest, would be predominantly represented in the membership of the commission, whose recommendations would nevertheless carry great weight with the Congress.

Since it was apparent that some boundary change would be proposed in Congress, the National Park Service, while in no way initiating or pressing the issue, at the request of Representatives Norman and Jackson, prepared for their use a bill defining a boundary along the lines of previous proposals, which would have rectified certain administrative shortcomings in the present boundary, but would have reduced the park by some 56,000 acres and approximately one-seventh of its commercially valuable timber. This bill, introduced as H. R. 2750 and 2751 by the two representatives, provided, as an alternative to the objectionable House Joint Resolution 84, a specific proposal on which public attention could be focused much more readily. This was the result.

It quickly became apparent that the desire of the Olympic Peninsula and Grays Harbor lumber interests went far beyond that proposal. Equally quickly, conservationists and conservation interests throughout the country recorded their united opposition to any change in the boundaries of the park. Hearings are to be held in the Pacific Northwest in September and later in Washington.

ABOLISHMENT OF JACKSON HOLE NATIONAL MONUMENT AGAIN PROPOSED

Representative Barrett of Wyoming, chairman of the House Subcommittee on Public Lands, is again sponsoring legislation (H. R. 1330) to abolish the Jackson Hole National Monument. The Department is opposed to its passage. At hearings held in April, Secretary Krug, in a written statement to the committee, stressed his conviction that the area was fully qualified for the status given it by the late President Roosevelt in 1943, and insisted that no injustice had been done to Jackson Hole stockmen or to owners of land within the monument. He recommended the passage of legislation which would as-

sure protection to Teton County against tax losses in the event any lands were removed from the tax rolls. In addition to his presentation and that of the Director of the National Park Service, a number of conservation groups, in writing or through personal representation, opposed the proposal, though several did suggest some modification of the boundaries.

Representative Barrett's bill, amended to provide for the addition of some 40,000 acres of the monument to Grand Teton National Park, and for transfer of all the rest, amounting to more than 180,000 acres, to Teton National Forest, was favorably reported by the full Public Lands Committee. On the unanimous consent calendar a few days before the end of the session, its passage was objected to by three members; it remains alive, however, and will doubtless come up for action not long after the Congress reconvenes.

Numerous newspaper stories have indicated that the amended bill is a compromise satisfactory to the Department and to those groups which have opposed the abolishment of the monument. On the contrary, it is highly objectionable to all those who value the natural and historic qualities of the present monument area. Much of the land proposed for Forest Service administration is virtually treeless; the entire area east of the Snake River, which offers the most striking view of the Tetons, would be eliminated, as would the fine mountain and lake wilderness north of the Buffalo Fork, and the equally interesting area west and northwest of Jackson Lake.

DISPOSITION OF RECREATIONAL DEMONSTRATION AREAS

Cuivre River, Lake of the Ozarks, and Montserrat Recreational Demonstration Areas were transferred to the State of Missouri for administration as units of its State park system. Pursuant to legislation enacted by the Seventy-ninth Congress, a 5,350-acre portion of Hopewell Village National Historic Site, containing organized group camps and other recreational facilities of local significance, was returned to its previous recreational demonstration area status and then transferred to the Commonwealth of Pennsylvania. Also under legislation enacted by the Seventy-ninth Congress, 14,777 acres of the 20,404-acre Custer area in the Black Hills of South Dakota were added to Wind Cave National Park. The remaining portion will be added to Custer State Park when the South Dakota Legislature enacts appropriate enabling legislation. On June 25, 1947, the President approved a bill (H. R. 2852) which transferred 384.5 acres of excess War Department lands to the Otter Creek area near Louisville, Ky., thus providing a suitable administrative unit totalling 1,768 acres which

is acceptable to the city of Louisville. Negotiations for consummating this transfer to the city are being concluded, as are those for the transfer of the Mendocino Woodlands area to the State of California.

Out of the 37 recreational demonstration areas under the administration of the National Park Service on June 6, 1942, 31 and part of another have been transferred to States or localities, or otherwise disposed of. Thus the Service is carrying out its intention to concentrate upon areas that are of distinctly national significance.

FLYING IN AND OVER THE PARKS

In accordance with the previously enunciated policy of the Service, regulations which forbid the landing of planes in any National Park System area, except in emergencies and except at a small number of existing airports and landing strips, were issued by the Department in February, 1947. Though a few editorials in aviation publications or aviation columns of newspapers took issue with the Service's policy, they were more than matched by editorial comment and letters which approved it.

The Service has not been successful in having height limitations established for flights over the parks and monuments. However, experience with the disturbance caused by planes has strengthened the conviction that such flights should be compelled to remain above a reasonable minimum altitude. The Service favors 2,000 feet.

National Park Service field personnel continue to cooperate in the effort to assure satisfactory landing facilities beyond but within reasonable distances of park boundaries.

CONFERENCES BUILD UNDERSTANDING AND MORALE

A National Park Service conference, held at Mammoth Cave National Park last October, was attended by more than 100 employees from field areas, regional offices and the Director's office. The first since 1940, it was spent in intensive discussion of service policies and programs and undoubtedly resulted in much better understanding of them by key personnel of the Service. Perhaps its greatest value was in its heightening of esprit de corps among men who had had to "play a lone hand" during much of the war period. Of great benefit, also, were conferences of chief clerks and of the regional staffs of the Branch of Development, held in the Director's office in Chicago, and in an in-service training conference, for a selected group of Region one field employees, held at regional headquarters in Richmond last January.

Although annual Service-wide conferences are desirable, lack of funds will prevent holding one during the present fiscal year.

THE NATIONAL PARK SYSTEM—PART OF A
LARGER WHOLE

The National Park System, conceived and brought into being on an American scale of grandeur, is a part—whose relative importance we shall not attempt to assay—of a vastly larger pattern of parks and recreation areas designed to minister to the leisure time of the American people. Numerous other Federal agencies, almost all of the States, many counties, numerous metropolitan districts, and hundreds of municipalities make their contribution to this pattern. Involved in it are questions of fields of responsibility; of cooperation, and the devising of methods of obtaining it without needless curtailment of authority; of furthering understanding of the necessity of providing both the means by which leisure may be used constructively and the impetus to such use of it.

The National Park Service means to take its fair part in this tremendous and important task; to assume, and to meet as best it may, such responsibilities as are placed upon it.

That assistance has meant, in the case of certain reservoir recreation areas, the undertaking of administration and development; in many more the appraisal of recreational values, and, frequently, the planning of recreational developments. In the newly formed Federal Inter-agency Committee on Recreation, opportunity is afforded for open-minded and candid discussion and the cooperative solution of problems of jurisdiction and responsibility. With the States, it involves a variety of cooperation of which perhaps the most important is that of encouraging the establishment of stable administrative and planning organizations, competent to manage the growing and increasingly useful State park systems and to assist the political subdivisions of the States in the meeting of their responsibilities. The Service does not consider it within its province to engage in the field of community recreation—perhaps the most basically necessary of all; but has consistently urged State agencies to concern themselves with it and to encourage it where such encouragement is needed. The National Park Service is glad to have a part in giving impetus to the State park movement. This work it undertakes without losing sight of its primary function, developing and interpreting the great places of truly national importance in the National Park System.

The values of the national parks are indicated by that gifted writer, Bernard De Voto, in an extraordinarily penetrating article in the June issue of *Fortune*. He writes:

Since the people using the parks have leisure and free will, they get in full measure what the parks have to offer. Well, what do they get? What justifies the national parks?

First of all, silence. In any park 3 minutes' walk will permit you to be alone in the primeval, and this single fact is enough to justify the entire National Park System. Moreover, you will enjoy the intimacy of nature as your forefathers knew it. * * * Our civilization excludes steadily increasing numbers of Americans from first-hand knowledge of nature—streams, plants, forests, animals, birds, even the effects of storm—and yet their need of it can never be extinguished. * * *

The national parks preserve not only the organic relationships of nature; they also preserve the extremes of natural spectacle and natural beauty. * * * If the simple experience of uncontaminated nature is inestimably good, so is such an equally simple experience as glimpsing the processes of creation in what the Colorado River and the wind and rain have done at the Grand Canyon—or how a glacier has gutted a peak, how a mountain range has slipped and folded along a fault line, how in the aeons of time the fundamental earth has been erected and then redistributed grain by grain.

* * * * *

National Park System, travel and area data, June 30, 1947

Areas (classification)	State	Federal land (acres)	Approximate visitors, fiscal year July 1, 1946– June 30, 1947	Approximate visitors, fiscal year July 1, 1945– June 30, 1946
NATIONAL PARKS				
Acadia.....	Maine.....	28,420.21	381,683	31,424
Big Bend.....	Texas.....	691,338.95	16,033	6,379
Bryce Canyon.....	Utah.....	36,010.38	132,461	73,780
Carlsbad Caverns.....	New Mexico.....	45,526.59	383,261	295,244
Crater Lake.....	Oregon.....	160,290.33	277,527	97,710
Everglades.....	Florida.....	270,720.00	(1)	(3)
Glacier.....	Montana.....	997,486.80	210,735	96,878
Grand Canyon.....	Arizona.....	645,135.91	533,306	333,969
Grand Teton.....	Wyoming.....	94,892.92	135,676	56,604
Great Smoky Mountains.....	Tennessee-North Carolina.....	461,000.19	1,136,604	945,468
Hawaii.....	Territory of Hawaii.....	173,404.60	352,864	418,801
Hot Springs.....	Arkansas.....	1,019.13	293,706	293,461
Isle Royale.....	Michigan.....	133,838.51	6,802	6,122
Kings Canyon.....	California.....	452,904.82	239,129	135,183
Lassen Volcanic.....	do.....	103,269.28	129,596	53,752
Mammoth Cave.....	Kentucky.....	50,547.51	172,099	104,237
Mesa Verde.....	Colorado.....	51,017.87	42,837	21,713
Mount McKinley.....	Alaska.....	1,939,199.04	1,557	133
Mount Rainier.....	Washington.....	241,524.77	971,052	398,458
Olympic.....	do.....	846,608.71	142,429	116,624
Platt.....	Oklahoma.....	911.97	468,203	438,450
Rocky Mountain.....	Colorado.....	252,626.19	812,278	476,098
Sequoia.....	California.....	385,100.13	349,581	227,211
Shenandoah.....	Virginia.....	193,472.98	765,701	690,413
Wind Cave.....	South Dakota.....	26,573.62	83,370	30,539
Yellowstone.....	Idaho-Montana-Wyoming.....	2,213,206.55	827,032	348,880
Yosemite.....	California.....	756,440.62	713,413	482,913
Zion.....	Utah.....	94,241.06	233,155	137,987
Total.....		11,346,729.64	9,812,090	6,318,481
NATIONAL HISTORICAL PARKS				
Abraham Lincoln.....	Kentucky.....	116.50	52,564	37,666
Chalmette.....	Louisiana.....	33.25	73,740	51,588
Colonial.....	Virginia.....	7,233.46	578,709	378,158
Morristown.....	New Jersey.....	958.37	284,716	257,904
Total.....		8,341.58	989,729	725,316
NATIONAL MILITARY PARKS				
Chick mauga and Chattanooga.....	Georgia-Tennessee.....	8,146.33	240,057	206,050
Fort Donelson.....	Tennessee.....	102.54	32,505	18,885
Fredericksburg & Spotsylvania.....	Virginia.....	2,420.71	99,268	66,271
Gettysburg.....	Pennsylvania.....	2,463.46	523,908	397,259
Guilford Court House.....	North Carolina.....	148.83	36,998	30,098

See footnotes at end of table.

National Park System, travel and area data, June 30, 1947—Continued

Areas (classification)	State	Federal land (acres)	Approximate visitors, fiscal year July 1, 1946— June 30, 1947	Approximate visitors, fiscal year July 1, 1945— June 30, 194
NATIONAL MILITARY PARKS— continued				
Kings Mountain.....	South Carolina.....	4, 012. 00	30, 859	26, 601
Moore's Creek.....	North Carolina.....	30. 00	3, 767	4, 343
Petersburg.....	Virginia.....	1, 324. 62	110, 621	147, 413
Shiloh.....	Tennessee.....	3, 717. 59	268, 971	157, 894
Stones River.....	do.....	323. 86	22, 520	28, 143
Vicksburg.....	Mississippi.....	1, 323. 56	25, 924	14, 654
Total.....		24, 013. 50	1, 395, 398	1, 097, 61
NATIONAL BATTLEFIELD PARKS				
Richmond.....	Virginia.....	684. 44	23, 725	17, 035
NATIONAL MEMORIAL PARKS				
Theodore Roosevelt.....	North Dakota.....	27, 756. 78	(1)	(1)
NATIONAL MONUMENTS				
Ackia Battleground.....	Mississippi.....	49. 15	(1)	(1)
Andrew Johnson.....	Tennessee.....	17. 08	23, 482	20, 500
Appomattox Court House.....	Virginia.....	968. 25	22, 050	12, 800
Arches.....	Utah.....	33, 769. 94	3, 080	1, 371
Aztec Ruins.....	New Mexico.....	25. 88	11, 929	7, 154
Bandlands.....	South Dakota.....	122, 972. 46	244, 691	75, 235
Bandelier.....	New Mexico.....	27, 048. 89	22, 055	16, 538
Big Hole Battlefield.....	Montana.....	200. 00	2, 303	1, 770
Black Canyon of the Gunnison.....	Colorado.....	13, 176. 02	18, 184	7, 599
Cabrillo.....	California.....	0. 50	71, 365	(1)
Canyon de Chelly.....	Arizona.....	83, 840. 00	2, 041	1, 299
Capitol Reef.....	Utah.....	33, 068. 74	(1)	(1)
Capulin Mountain.....	New Mexico.....	680. 42	24, 960	16, 750
Casa Grande.....	Arizona.....	472. 50	34, 041	24, 582
Castillo de San Marcos.....	Florida.....	18. 51	260, 985	260, 192
Castle Pinckney.....	South Carolina.....	3. 50	(1)	(1)
Cedar Breaks.....	Utah.....	6, 052. 20	22, 663	18, 514
Chaco Canyon.....	New Mexico.....	18, 039. 39	1, 337	1, 466
Channel Islands.....	California.....	1, 119. 98	(1)	(1)
Chiricahua.....	Arizona.....	10, 529. 80	15, 161	8, 646
Colorado.....	Colorado.....	18, 120. 55	44, 672	25, 652
Craters of the Moon.....	Idaho.....	47, 210. 67	21, 491	10, 639
Custer Battlefield.....	Montana.....	765. 34	50, 706	33, 569
Death Valley.....	California.....	1, 850, 565. 20	157, 303	72, 499
Devil Postpile.....	do.....	798. 46	(1)	(1)
Devils Tower.....	Wyoming.....	1, 193. 91	36, 301	16, 197
Dinosaur.....	Colorado-Utah.....	190, 798. 49	7, 509	5, 355
El Morro.....	New Mexico.....	240. 00	1, 899	1, 217
Father Millet Cross.....	New York.....	0. 01	(1)	(1)
Fort Frederica.....	Georgia.....	74. 53	34, 946	4, 900
Fort Jefferson.....	Florida.....	86. 82	8, 778	5, 588
Fort Laramie.....	Wyoming.....	214. 41	11, 635	7, 606
Fort Matanzas.....	Florida.....	18. 34	13, 260	9, 156
Fort McHenry.....	Maryland.....	47. 64	504, 242	539, 357
Fort Pulaski.....	Georgia.....	5, 427. 39	(1)	(1)
Fossil Cycad.....	South Dakota.....	320. 00	(1)	(1)
George Washington Birthplace.....	Virginia.....	393. 68	37, 176	23, 413
Gila Cliff Dwellings.....	New Mexico.....	160. 00	(1)	(1)
Glacier Bay.....	Alaska.....	2, 297, 456. 27	(1)	(1)
Grand Canyon.....	Arizona.....	196, 051. 00	172	46
Gran Quivira.....	New Mexico.....	450. 94	2, 286	1, 131
Great Sand Dunes.....	Colorado.....	35, 908. 19	10, 790	6, 121
Holy Cross.....	do.....	1, 392. 00	(1)	(1)
Homestead.....	Nebraska.....	162. 73	1, 072	139
Hovenweep.....	Utah-Colorado.....	299. 34	122	132
Jackson Hole.....	Wyoming.....	173, 064. 62	(1)	(1)
Jewel Cave.....	South Dakota.....	1, 274. 56	10, 039	1, 748
Joshua Tree.....	California.....	655, 961. 33	47, 959	35, 040
Katmai.....	Alaska.....	2, 697, 590. 00	(1)	(1)
Lava Beds.....	California.....	46, 027. 56	30, 737	23, 325
Lehman Caves.....	Nevada.....	640. 00	3, 808	2, 402
Meriwether Lewis.....	Tennessee.....	300. 00	12, 348	7, 552
Montezuma Castle.....	Arizona.....	783. 09	18, 528	11, 077
Mound City Group.....	Ohio.....	57. 00	20, 849	(1)
Muir Woods.....	California.....	424. 56	277, 557	222, 471
Natural Bridges.....	Utah.....	2, 649. 70	959	413

See footnotes at end of table.

National Park System, travel and area data, June 30, 1947—Continued

Areas (classification)	State	Federal land (acres)	Approximate visitors, fiscal year July 1, 1946- June 30, 1947	Approximate visitors, fiscal year July 1, 1945- June 30, 1946
NATIONAL MONUMENTS—con.				
Navajo.....	Arizona.....	360.00	368	351
Ocmulgee.....	Georgia.....	683.48	28,716	32,196
Old Kasaan.....	Alaska.....	38.00	(1)	(1)
Oregon Caves.....	Oregon.....	480.00	77,885	29,626
Organ Pipe Cactus.....	Arizona.....	328,161.73	77,490	75,484
Perry's Victory.....	Ohio.....	14.25	27,500	35,740
Petrified Forest.....	Arizona.....	85,303.63	306,576	199,390
Pinnacles.....	California.....	12,817.77	17,702	14,097
Pipe Spring.....	Arizona.....	40.00	949	1,046
Pipestone.....	Minnesota.....	115.60	3,193	3,889
Rainbow Bridge.....	Utah.....	160.00	(1)	(1)
Saguaro.....	Arizona.....	53,669.24	16,098	15,585
Scotts Bluff.....	Nebraska.....	2,196.44	53,642	43,842
Shoshone Cavern.....	Wyoming.....	212.37	(1)	(1)
Sitka.....	Alaska.....	57.00	1,799	3,987
Statue of Liberty.....	New York.....	10.38	543,548	529,140
Sunset Crater.....	Arizona.....	3,040.00	11,946	6,773
Timpanogos Cave.....	Utah.....	250.00	53,109	40,128
Tonto.....	Arizona.....	1,120.00	16,338	11,367
Tumacacori.....	do.....	10.00	22,718	17,014
Tuzigoot.....	do.....	42.67	12,057	8,708
Verendrye.....	North Dakota.....	253.04	(1)	(1)
Walnut Canyon.....	Arizona.....	1,641.62	19,179	15,804
Wheeler.....	Colorado.....	300.00	(1)	(1)
White Sands.....	New Mexico.....	140,247.04	89,493	72,345
Whitman.....	Washington.....	45.84	(1)	(1)
Wupatki.....	Arizona.....	34,853.03	3,489	2,349
Yucca House.....	Colorado.....	9.60	11	47
Zion.....	Utah.....	33,920.75	(1)	(1)
Total.....		9,279,035.02	3,531,277	2,600,069
NATIONAL BATTLEFIELD SITES				
Antietam.....	Maryland.....	183.32	31,970	26,056
Brices Cross Roads.....	Mississippi.....	1.00	(1)	(1)
Cowpens.....	South Carolina.....	1.00	1,217	407
Fort Necessity.....	Pennsylvania.....	2.00	76,986	57,968
Kennesaw Mountain.....	Georgia.....	60.00	33,295	25,139
Tupelo.....	Mississippi.....	1.00	(1)	(1)
White Plains.....	New York.....		(1)	(1)
Total.....		248.32	143,468	109,570
NATIONAL HISTORIC SITES				
Adams Mansion.....	Massachusetts.....	4.05	(1)	(2)
Atlanta Campaign Markers.....	Georgia.....	20.96	(1)	(1)
Federal Hall Memorial.....	New York.....	.49	69,662	68,175
Fort Raleigh.....	North Carolina.....	16.45	110,785	24,832
Home of Franklin D. Roosevelt.....	New York.....	33.23	486,236	113,772
Hopewell Village.....	Pennsylvania.....	848.06	85,801	63,946
Jefferson National Expansion Memorial.....	Missouri.....	82.58	27,801	33,940
Manassas Battlefield Park.....	Virginia.....	1,604.57	8,297	7,104
Old Philadelphia Custom House.....	Pennsylvania.....	.79	30,985	27,238
Salem Maritime.....	Massachusetts.....	8.61	10,522	6,714
Vanderbilt Mansion.....	New York.....	211.65	54,004	26,426
Total.....		2,831.44	884,093	372,197
NATIONAL MEMORIALS				
House Where Lincoln Died.....	District of Columbia.....	.05	63,043	66,226
Kill Devil Hill.....	North Carolina.....	314.40	54,649	20,461
Lee Mansion.....	Virginia.....	.50	317,991	304,433
Lincoln Memorial.....	District of Columbia.....	.61	1,274,967	681,932
Lincoln Museum.....	do.....	.18	103,609	106,335
Mount Rushmore.....	South Dakota.....	1,686.40	341,298	147,520
New Echota Marker.....	Georgia.....	.92	(1)	(1)
Thomas Jefferson.....	District of Columbia.....	1.20	589,589	661,508
Washington Monument.....	do.....	.37	834,693	751,382
Total.....		2,004.63	3,579,839	2,739,797

See footnotes at end of table.

National Park System, travel and area data, June 30, 1947—Continued

Areas (classification)	State	Federal land (acres)	Approximate visitors, fiscal year July 1, 1946–June 30, 1947	Approximate visitors, fiscal year July 1, 1945–June 30, 1946
NATIONAL CEMETERIES				
Antietam.....	Maryland.....	11.36	(⁶)	(⁶)
Battleground.....	District of Columbia.....	1.03	2,700	2,700
Fort Donelson.....	Tennessee.....	15.34	(⁶)	(⁶)
Fredericksburg.....	Virginia.....	12.00	(⁶)	(⁶)
Gettysburg.....	Pennsylvania.....	15.55	(⁶)	(⁶)
Poplar Grove.....	Virginia.....	8.72	(⁶)	(⁶)
Shiloh.....	Tennessee.....	10.25	(⁶)	(⁶)
Stones River.....	do.....	20.09	(⁶)	(⁶)
Vicksburg.....	Mississippi.....	119.76	(⁶)	(⁶)
Yorktown.....	Virginia.....	2.91	(⁶)	(⁶)
Total.....		217.01	2,700	2,700
NATIONAL PARKWAYS				
Blue Ridge.....	North Carolina-Virginia.....	38,911.50	1,290,716	683,959
George Washington Memorial.....	Virginia-Maryland.....	2,784.76	(¹)	(¹)
Natchez Trace.....	Tennessee-Alabama-Mississippi.....	13,648.87	(¹)	(¹)
Total.....		55,345.13	1,290,716	683,959
NATIONAL CAPITAL PARKS				
National Capital Parks.....		27,874.78	(¹)	(¹)
Grand total, National Park System.....		20,775,082.27	21,653,035	14,666,735
NATIONAL RECREATIONAL AREAS				
Coulee Dam.....	Washington.....	98,500.00	(¹)	(¹)
Lake Mead.....	Arizona-Nevada.....	1,680,133.33	1,225,992	992,397
Lake Texoma.....	Texas-Oklahoma.....	161,137.00	(¹)	(¹)
Shasta Lake.....	California.....	125,230.00	(¹)	(¹)
Millerton Lake.....	do.....	11,605.00	(¹)	(¹)
Total.....		2,076,605.33	1,225,992	992,397
PROJECTS ⁷				
Saratoga National Historical Park.....	New York.....	1,864.60	47,738	19,243
Kennesaw Mountain National Battlefield Park.....	Georgia.....	3,034.21	(⁶)	(⁶)
Cape Hatteras national seashore recreational area.....	North Carolina.....	74.00	(¹)	(¹)
Olympic public works project.....	Washington.....	43,730.76	(¹)	(¹)
Total.....		48,703.57	47,738	19,243
Grand total, National Park System and other areas and projects under the jurisdiction of National Park Service.....		22,932,187.71	22,926,675	16,094,834

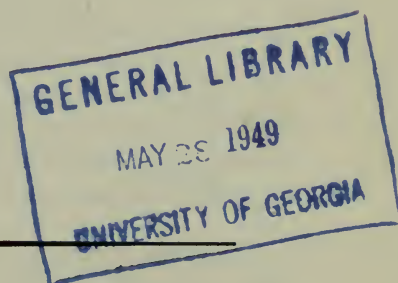
¹ No travel figures available or maintained.² Not established.³ Travel shown from April through June 1947 only.⁴ Closed to public.⁵ Travel shown from Aug. 1, 1946, through June 1947.⁶ Included in travel figures of adjacent battlefield sites, military or historical parks, or memorials.⁷ Includes only those in which lands are under National Park Service administration.⁸ 416,459 visitors to Santa Rosa Island National Monument, which was abolished by act of Congress, July 1946.

ANNUAL REPORT
of the DIRECTOR
NATIONAL PARK SERVICE
to the
SECRETARY OF THE INTERIOR

Reprinted from the

ANNUAL REPORT OF THE SECRETARY
OF THE INTERIOR

For the Fiscal Year Ended June 30, 1948



Fiscal Year Ended June 30

1948



UNIVERSITY OF GEORGIA
GENERAL LIBRARY
OCT 1 1971

The National Park Service

NEWTON B. DRURY, *Director*

NATIONAL parks are an American invention. In the establishment of these scenic reserves and in the preservation of places of historic, prehistoric, and scientific importance as national monuments, military and historical parks, for human "benefit and enjoyment," this Nation has originated a distinct type of land management and has acted on a scale that justifies deep pride in the hearts of the 145,000,000 men and women and children who own these lands.

The National Park System affords Americans a means of obtaining a better understanding of the natural forces and human influences that have shaped their land. Visitors have been impelled by many motives as, since the war, they have in unprecedented numbers eagerly sought the national parks. They come to see, to enjoy, to learn, to find refreshment of body and spirit. The touch with unspoiled nature gives them strength. Living again in memory the heroic episodes of our past enhances their national pride.

In endeavoring to attain the purpose of the National Park System, the National Park Service faces two great challenges:

First, the need of more adequate funds. The appropriations provided have fallen far short of the requirements created by vastly increased attendance, the establishment of new areas and new functions, the cessation of development during the war, and the obvious fact that, measured in dollars, much greater sums than were formerly adequate are needed to do today the work of protecting, administering, and developing the national parks.

Second, the increasing pressure for breaking down national park policies and standards. Economic need in some cases, and sheer promotion in others, has led to greater and greater demands for the cutting of forests, the grazing of meadows, the damming of streams and lakes, and other destructive uses of the national parks.

Both of these issues call for thoughtful analysis and concerted effort on the part of all who believe in the National Park Service and the importance of its work. In this report we consider it our duty to discuss them factually, as well as to tell what has been accomplished during the past year.

To attain the purposes of the national parks, as intended by the Congress and the American people, requires something more than setting aside the lands themselves. It takes, first, thoughtful plan-

ning for the uses to which they are to be put, then the development toward which that planning is directed. It requires all the means of helping people to appreciate their significance and, in enjoying them, to use them without abuse. There must be constant maintenance and repair so that all facilities—roads, trails, structures, utilities—may provide the services expected of them.

During the travel year that ended on September 30, 1947, more than 25,250,000 persons visited the areas administered by the National Park Service—an increase of better than 3,500,000 over the preceding year. This year's record will undoubtedly exceed that by a million or two. Yet, while some areas appear at times to be overcrowded most of them are far from being used to capacity. Many more Americans should share in their enjoyment.

To this end there is needed a comprehensive program of development and improvement. This involves modernized road and trail systems; suitably placed and pleasant-to-use camp grounds; adequate water and waste-disposal systems; decent housing for employees and their families; modern administrative and working quarters, museum and trailside exhibits; and, whatever the means of providing them sufficient accommodations for visitors, offered to them at prices that all groups of our people can afford.

There are needed, too, a more adequate and better executed program of services that will help the visitor to understand the purposes for which these areas have been established and to appreciate the natural phenomena or the historic objects preserved in them; better facilities and enlarged staff to acquaint the general public with their park estates and to give adequate provision for the protection of priceless and irreplaceable properties against either unnecessary wear or the acts of the careless and the vandalistic. Most of all there is needed, in the words of Secretary Krug, "protection of resources which are now being used for their highest purpose—the inspiration and enjoyment of the American people—against any commercial exploitation that cannot be justified on the basis of need so great that the economic stability of our country, or its existence, would be endangered unless such uses were permitted."

The annual report of the Director for the fiscal year 1947 gave concrete examples illustrating two outstanding facts: (1) That the National Park Service was not adequately staffed, either in field or central offices, to perform satisfactorily the functions expected of it and (2) that the National Park System, seriously undeveloped, was not equipped to care properly for numbers of visitors vastly greater than those for which most of the existing plant was originally designed.

The past year has brought aggravation to, rather than relief from, the conditions then existent. Staffs in the field areas, to care for the

safety, comfort, sanitation, and interpretive needs of visitors, remain materially smaller than before the war. Anticipated construction programs, so often mentioned in terms of bright promise during the war, have failed to materialize. Millions of Americans have visited the parks under conditions which do not permit full measure of enjoyment; very real physical harm has been done which will require years to correct or erase.

Development needed soon.—The sober conclusion must be faced that a great deal of development work must be undertaken, and soon, without waiting longer for that hoped-for time when the costs of construction may decrease. Without such a program, the National Park System cannot serve the public as it should.

Another aspect of the present situation gives us deep concern. It is only by the exercise of great ingenuity and a loyal public-spirited disregard of overtime that it has been possible for the present employees to keep things going to the reasonable satisfaction of the visiting public. No public agency, however, can operate "on a shoe-string" indefinitely and expect to sustain the morale of even the most conscientious and devoted employees.

Older areas need new look.—Many of the long established areas of the system received most of their existing development 20 or more years ago when travel was in tens of thousands by comparison with the hundreds of thousands in the same areas today. Since then, some progress has been made in planning and construction. Road systems crystallized, and a good start was made on circulation systems involving roads, bridges, and tunnels. Yet some roads started as early as 1931, representing the investment of several millions of dollars, are still incomplete. Perhaps the outstanding example is the New Tioga Road in Yosemite National Park, where two stretches of modern, improved highway are separated by 21 miles of crooked, dangerous, and unimproved road. Other examples are the long incomplete road system at Acadia National Park, and the half-finished Stevens Canyon road at Mount Rainier. There are many others.

The CCC and WPA programs permitted considerable progress in developments that did not require large quantities of materials or skilled labor. General clean-up, camp-ground development, trail construction, and the building of protective truck trails made good progress; but no similar sources of labor are now available.

Only a few of the larger buildings and utility systems required for most of the parks were provided through emergency funds. Today there is a tremendous accumulated need for employee housing, fire-resistant shop and warehouse buildings, administration and museum buildings and enlarged camp grounds, as well as for additional lodges and cabins usually provided by concessioners and the utilities required to serve them. In several of the parks the point has been reached

where entire headquarters or hotel and lodge operations need to be scrapped and others provided at more suitable sites. In some cases, needed expansion cannot be undertaken at present sites without encroachment on scenic features. In others, sites with more adequate water supplies are required; in still others, developments need to be removed to locations where there is less snow to render winter operation difficult and expensive. Mount Rainier, Crater Lake, and Sequoia National Parks all need relocation of headquarters. The Canyon area at Yellowstone and the Giant Forest area at Sequoia are undergoing similar transition as to hotel and lodge facilities.

Use outruns development.—The newer areas, several of which are large and offer complex problems of development, are receiving heavy use before even the most simple facilities are provided, yet by no means as much as would be the case if they were properly developed. Olympic National Park is inadequately developed, and Kings Canyon but little better. Public use is pushing far ahead of provision for it in Big Bend and Everglades National Parks, in Lake Mead, Millerton Lake, Coulee Dam, and Lake Texoma recreational areas, and in numerous smaller areas such as Theodore Roosevelt National Memorial Park, Fort Frederica National Monument, and the Home of Franklin D. Roosevelt and Adams Mansion National Historic Sites.

The case of the oldest park.—It will perhaps be enlightening to analyze the development needs of a few typical areas. Yellowstone National Park, longest established of any in the System, probably exemplifies most of the conditions which today prevent the older national parks from offering visitors the satisfying experience they seek.

In 1920, 99 percent of the 80,000 visitors to Yellowstone came by train and toured the park in open motor buses. Seven years later, 99 percent of visitors came in their own cars. The total had jumped to 200,000 for the season, and the average stay was 3 to 5 days.

In 1925, the Service started to convert the wagon-road system of the park to a motor-road system. By 1935, enough had been reconstructed for the average visitor to make the park tour in 2 or 3 days. That year, attendance reached 318,000. By 1941, when there were 582,000 visitors, most of the Grand Loop had been reconstructed though about one-eighth of it was still to be graded and a quarter of it to be surfaced. The south, east, and northeast entrance roads had been rebuilt, but not those coming in from Gardiner or West Yellowstone. Practically no reconstruction has been accomplished since 1941 and much that had previously been built has deteriorated so seriously as to need major repairs—something far beyond mere maintenance.

In 1941 accommodations of all sorts, including the auto camps, were geared to an annual visitation of less than half a million, with an average stay of 2 to 3 days. Yet during the 1947 travel season, 932,000

visitors bounced over the bad roads; camp grounds were far from adequate to meet their requirements; many who sought accommodations were forced either to sleep in their cars or to shorten their stay by seeking quarters 60 to 80 miles outside the park. This year it seems certain the visitor total will exceed a million. Probably nothing short of another war would ever reduce attendance at this park of varied attractions to so low a figure as half a million; it is fair to assume that it will continue to remain at nearly twice that figure, and its development should be based on that assumption.

The development at Old Faithful has about reached the saturation point. New facilities are planned at Thumb to accommodate the steadily increasing number of visitors entering from the south, and to take the overflow from Old Faithful. A lodge and cabin camp is projected to accommodate 1,200 to 1,500 persons, as well as an automobile camp of 400 to 500 sites, to be supplemented by a tourist center providing the necessary stores, service stations, etc. This will mean a concessioner investment of \$750,000 to \$900,000, and the expenditure of about \$600,000 by the Government on camp grounds, roads, parking areas, and the necessary utilities—water, sewers, and power.

At Canyon, redevelopment to replace obsolete facilities and increase capacity will require an investment by the concessioner of \$1,000,000 to \$1,250,000 and by the Government of \$600,000 to \$700,000. At Old Faithful, increased travel requires major changes in vehicle circulation, to be coordinated with the relocation of certain other facilities. There is need for Government expenditures here, within the next 2 or 3 years, of \$100,000 to \$150,000 in expansion and modernization of utilities and approximately half a million dollars for road relocation, additional parking areas, and secondary roads.

At Lake and Fishing Bridge, the Government program calls for extension and improvement of utilities costing \$200,000 to \$300,000, camp-ground extension costing \$150,000 to \$175,000, and \$300,000 to \$400,000 for construction of necessary roads and parking areas. The headquarters area at Mammoth has been utilizing for 30 years an abandoned Army post; here is needed a new facility designed for the purpose. A new administration-museum building, a modern and efficient utility area of warehouses, shops, equipment storage, etc., and considerable new construction as well as reconstruction of employees' living quarters would cost \$2,000,000 to \$2,500,000. Outlying developments of various kinds would require another \$500,000.

The status of the highway system of the park has already been indicated. The present road system, when completed, should be adequate to handle the traffic of the next decade. The over-all figure for its completion is \$11,000,000 to \$13,000,000.

Over and above the investment required of the concessioner, adequate developments at Yellowstone National Park over a period of

10 years would involve the expenditure of \$15,000,000 to \$20,000,000 of appropriated funds.

What Great Smoky needs.—Great Smoky Mountains National Park is another example. It was added to the System during the 30's and benefited greatly from the kind of development that could be supplied by the CCC; it also acquired a fine headquarters building on the Tennessee side and a subheadquarters building near the North Carolina entrance, which were PWA projects. However, it has no central utility group. Interpretive facilities are extremely meager. Employees away from headquarters are housed in residences surviving from the days before the park was established, many of which lack even the most essential of modern conveniences, while headquarters employees are at the mercy of resort-town rents.

Both in North Carolina and Tennessee there is considerable impatience over the lack of development in this park, and the two States have organized jointly to urge an accelerated development and a staff of sufficient size to provide adequate protection and a well-rounded interpretative program.

The completion of major roads now on the master plan of the park, and 14 miles of reconstruction of the Newfound Gap Road, would cost about \$14,500,000; minor roads and trails call for approximately \$460,000 more. Employee residences, utility structures, picnic and camp ground developments, museums and other interpretative facilities, sewer, water, telephone and power lines, and miscellaneous physical improvements would cost approximately \$2,000,000.

It has been considered desirable to give these specific facts about these two well-known parks, but the conditions are not materially different from those in such older parks as Yosemite, Mount Rainier, Grand Canyon, Rocky Mountain, Crater Lake, and others, and, as already noted, in those more recently added to the System.

Wupatki.—Similar considerations apply to most of the smaller areas, notably the national monuments. Wupatki National Monument, in eastern Arizona, rich in the ruins of pueblos and homesites of the ancestors of the Hopis, is a typical case. A monument since 1924, it was enlarged from its original 640 acres to more than 34,000 in 1937, when it was first reached by highway. In 1940 it was provided with a residence, a garage, and a water system. That is all it has ever had.

Because it was underdeveloped and understaffed, ruins have been destroyed by cattle and pot-hunters; visitors have had a difficult time reaching the ruins and have not been given interpretive or guide service; nearby residents have discouraged potential visitors from going to the area; and generally the purpose of the monument—preservation of the ruins and intelligent presentation to the public—has been defeated.

Comparatively modest sums are required to equip Wupatki and other smaller areas. An adequate water system; administration, residential, and utility buildings; light, power, and communication; and the fencing of the boundaries would cost little more than \$100,000 at Wupatki. A proper circulation system of roads and trails would cost about \$250,000. Wupatki's situation is not unique; on the contrary, it is duplicated in greater or less degree in most of the monuments.

What has been said about Yellowstone, Great Smoky, and Wupatki might be repeated as to most of the areas, big and small, in the National Park System.

Water rights subject to lapse.—One matter of paramount importance wherever people congregate has been given scant attention in developing the national parks. Adequate water supplies in parks and monuments throughout the West are obtained in many instances through grants of water-right permits by the various States. Proofs of construction of water systems and actual use of water must be made before final water-right licenses or certificates are granted, on schedules prescribed by the various States to show diligent prosecution of the work. Although some proofs are being made, in increasing instances extensions of time must be sought from State engineers because of failure to complete water systems or make full use of water under the more than 100 permits now in effect. Until the construction, reconstruction, or enlargement of water systems to meet the greatly enlarged water requirements of present-day attendance can be provided, many of the rights cannot be perfected for the use of more water than was used by the visitor population of 1940 and 1941.

A glance at Alaska.—The tourist industry, it is generally recognized, offers one of Alaska's greatest opportunities to improve her economy. There are three major units of the National Park System in Alaska, comprising nearly 7,000,000 acres. Of these only Mount McKinley National Park has either development or administration, though neither is adequate. Katmai and Glacier Bay National Monuments are both completely undeveloped.

Glacier Bay National Monument has superlative scenic qualities probably not surpassed by any national park. It contains 2,297,456 acres. Located only 45 miles west of Juneau, capital of the territory, it is easily accessible to existing steamer routes, and is only an 8-hour cruise from Juneau by small boat. Acquaintance with it and its spectacular natural features—its mountains, glaciers, ice fields, and wild-life—is denied to prospective visitors by its lack of docking facilities, lodgings, eating places, and other facilities.

During the war, the National Park Service permitted the War Department to build a first-class airfield near the entrance to Glacier Bay. It is now operated by the Civil Aeronautics Administration, and is a key field in the Alaska air navigation pattern. Weather

conditions are so favorable that planes can take off or land there when other Alaska fields are closed in. Development of facilities at Glacier Bay would provide for monument visitors arriving either by boat or plane, and for plane passengers held there because of bad flying conditions at other fields.

An initial development is planned at Bartlett Cove, $6\frac{1}{2}$ miles from the airfield, and close to the established steamer route. Accommodations here would provide the principal base for small-boat trips to the upper reaches of Glacier Bay. The proposed development, including that at Bartlett Cove and in outlying areas, is estimated to cost between \$3,250,000 and \$3,500,000.

Katmai National Monument is not so convenient to reach and contains less to attract the general run of tourists. It principally needs a small administrative and protective staff, now totally lacking, and the housing and other facilities such a staff would require.

With millions visiting the parks of the mainland, the National Park Service cannot logically contend that the Alaska areas should have priority over the parks that are more heavily used. Yet if the policy of the Government is to stimulate tourist travel to Alaska, we consider it important to point out the above pertinent facts.

Voices from the field.—Park and monument superintendents and custodians are a loyal, hard-working, patient group. They are not, as a rule, and by nature, prone to complain. Most of them are accustomed to having to get along with something less than seems desirable or even necessary. They do, however, attempt to report conditions and situations as they find them. It is natural therefore, that their own annual reports should reflect inadequacies of development. The quotations which follow are only a few of many which appear in these reports:

Camp grounds continue to be overcrowded and the associated vegetative cover continues to receive abuse. Vegetation in some areas may be irreparably damaged, but in any event restoration will be slow and costly. New and enlarged camp grounds are urgently needed to provide facilities for the unprecedented number of visitors desiring camping accommodations.—Regional Director, Region Two, Omaha, Nebr.

Expanded parking facilities and relief of congestion in the concessioner's development area are two critical needs. As studies continue, it becomes more evident that nearly all aspects of existing physical improvements are affected.—Mesa Verde National Park, Colo.

Forecasts have been published in the newspapers stating that the San Joaquin Valley will be the home of 10 million people within the next several decades. A census figure even half of that predicted will exert heavy pressure for greatly expanded facilities in Sequoia and Kings Canyon National Parks. It is a situation which alone makes the immediate start of a program of expansion of facilities urgently necessary.—Sequoia-Kings Canyon National Parks, Calif.

The primary purpose of the Master Plan cannot be achieved until an adequate water supply is obtained from one of the several possibilities: Privately owned

springs, a 7-mile pipe line, or drilled wells. Whatever the decision may be, it will require money.—Wupatki National Monument, Ariz.

With nearly 300 miles of oil-surfaced roads, most of them constructed approximately 10 years ago, depreciation all over the monument has been progressing very rapidly. Many miles are becoming almost unsafe for travel. The condition of buildings is even more acute, as allotments have done little more than permit some reroofing and minor repairs. Employees' residences were constructed of the lightest possible materials and it has not even been possible to paint them on the outside to check destruction of the Celotex siding.

Water mains in almost all instances were constructed with CCC funds and all galvanized pipe, which deteriorates rapidly here unless asphalt dipped and covered. Scarcely a week goes by that breaks do not occur, particularly in the public camp ground. All mains should be replaced soon.—Death Valley National Monument, Calif. and Nev.

Conditions have changed little from a year ago, due to lack of funds and general shortage of needed equipment and supplies. Roads and picnic areas are inadequate to accommodate the crowds. Rest rooms are not yet completed. The water supply for the picnic areas is inadequate, and plans should be made to improve this condition.—Great Sand Dunes National Monument, Colo.

Our administrative office building is an old residence with outdoor plumbing. More than half our employees must live outside the park because we have only 14 housing units to accommodate 28 regular employees. This means half our personnel have to find houses outside the park in a small village where the only resource is to buy; no houses are rented. Many of the available units are too small. We have one family of three in a one-room house. Three families of four are living in one-bedroom houses.—Zion National Park, Utah.

Employee housing.—The critical problem of employee housing is dwelt upon by practically all of our superintendents. It is the policy of the National Park Service to provide housing for its employees in the field only where they cannot reasonably be expected to obtain it in nearby communities. Yet in a great many cases it is necessary, in the interest of employee and Service alike, to construct housing with appropriated funds. Field employees are subject to frequent transfer as the needs of the Service require or as they advance in the organization. It is seldom practical for them to own their own homes—a condition which sets them apart from the vastly greater number of Americans who are more permanently parts of their communities. It is believed that there is ample justification for Government ownership of residence structures in all but the few cases in which areas are close to large urban communities. The situation is not materially different from that of members of the Armed services, for whom the provision of housing has long been accepted as necessary and justified.

The 40-hour week and the change in marital status of the majority of those who now seek employment with the Service—mostly married veterans—amply justifies a housing construction program that, for a period of 3 or 4 years, would utilize each year an amount equal to the Service's total physical improvements appropriation for the 1949 fiscal year.

The Shortage of Personnel and Its Effects

The widespread shortage of personnel in the parks and monuments and in central offices, which has existed since the war, continued and grew worse during the year just past, nor is any relief in sight during the 1949 fiscal year. Increases in appropriations for administration, protection, and maintenance of field areas over those for last year are not nearly sufficient to meet the increases in wages to "wage board" employees (those whose rates of pay are determined by wage boards in contrast to those whose rates of pay are fixed by the Classification Act) and the much greater costs of necessary supplies.

The Service obviously is not staffed to serve the public in a manner that permits the fullest enjoyment of the areas it administers. It cannot supply the protection critically needed for natural and historical features. Yet, as during preceding years, employees have contributed uncompensated overtime to an extent deeply appreciated by all those in authority in the Service but little understood by the visiting public.

About 21,071 hours of overtime in one park.—"In order to keep the park operating with limited funds, it was necessary for permanent employees to work many hours of overtime without pay," says the Superintendent of Glacier National Park in his annual report. "A special report was submitted on February 28, 1948, showing that 21,071 man-hours of voluntary overtime had been contributed from July 1, 1946, to January 31, 1948. Since then, the amount of voluntary overtime has increased considerably and will continue to increase."

In many parks, inadequacies of personnel have resulted in considerable losses in revenue. At Glacier, it was possible to man only two entrance stations; at Grand Canyon, in June, only a single ranger could be assigned to the east entrance, for 8 hours a day; the same was true at the north entrance. At Rocky Mountain, the superintendent estimates that revenues which would have amounted to more than \$8,000 went uncollected because of inability to maintain continuous entrance station operation. The superintendent at Yellowstone set the loss there at \$75,000. At Zion, the available ranger force could operate the two checking stations only a part of the time during the winter. Similar situations in a number of other areas are complicated by the fact that, to avoid still greater losses of revenue, rangers are assigned to checking stations who are greatly needed for protective services.

Field comment.—Taking again the testimony of men who are in the best position to know, the following are typical of expressions which appear in reports from field areas throughout the National Park System:

Automotive and other equipment has deteriorated abnormally because of lack of mechanics and an equipped repair shop. Timber trespass is given mutu-

encouragement because of our lack of anyone to establish our boundaries satisfactorily.

Inadequate ranger personnel does not allow sure protection to our many species of wildlife. Enforcement of regulations has been sadly neglected in certain sections due to the impossible task of covering so great an area with a force designed for an area of about one-fourth its size.

Only a sincere love for the national park concept and a truly loyal feeling for the Service has impelled our men and women to carry on in the face of what seemed insurmountable obstacles.—Olympic National Park, Wash.

All branches of the park's administration, protection, and maintenance groups are understaffed. The duties expected of them are more than can possibly be performed. Thus it is necessary for all branches as well as the administrative office to lag in their duties and try to pick up the tasks that are most important and let others fall behind.—Big Bend National Park, Tex.

The postwar travel exceeds prewar travel by 400 percent and has been handled without an increase in the ranger service. The impact of increased visitation has resulted in an increasing amount of vandalism, which, if continued, will seriously and permanently impair the cave formations. Interpretation is well below the desired standard due to the number of visitors each ranger must handle.—Wind Cave National Park, S. Dak.

The shortage of funds results in inadequate personnel for administration of the areas. For example, Fort Pulaski National Monument must be closed 2 days of the week; at Fort Frederica little service can be given to the numerous visitors because of the work to be done in clean-up and maintenance by the custodian and one maintenance man; the sizeable operation at Fort Jefferson demands the full time of three men at the fort and compels us to operate the 65-foot boat across 60 miles of open water with one man. The staff at the Castillo is so small that frequently the large classes of school children from Florida and Georgia, convention groups, and organizations must wander through this unusual historical structure without supervision or information service.

Our personnel are enthusiastic and devoted to jobs of public service and continue to perform admirably without complaint. But it is hard for our friends and supporters to understand why complete services are not available 7 days a week, especially when our areas are the principal objectives of the traveler.

The answer to our problem in the Southeast is not the building up of a big organization. The addition of one or two men at most areas, or three at the critical areas, would permit us to give the protection and the service the traveling public deserves and pays for. Private attractions, in the lower South, know that adequate service is good business. The same degree of service would be good business for the National Park Service.—Southeastern National Monuments, Fla. and Ga.

A feature of the monument travel which is hard to control is the heavy night use. Local people who want to escape the heat of the valley spend the evenings on the drive. Also hoodlums looking for a place to hold an all-night party. With personnel insufficient for even an 8-hour shift it is a problem to supply much protection or control, not to mention service or any interpretive program. It is only by donating long hours of overtime that even the pressing maintenance, sanitary, and control problems are cared for.—Colorado National Monument, Colo.

Operating with two rangers less than in prewar days resulted in a minimum of patrolling. Valuable deposits of petrified wood adjacent to Highway 260 and near the boundaries in accessible places were left unprotected, except for possibly one or two patrols each week.—Petrified Forest National Monument, Ariz.

Vandalism.—Reports from the field also comment, as they have for the past several years, on the extent of vandalism, which seems to vary inversely with the adequacy of protective forces. This is equally true with respect to the carelessness that results in littered roadsides, campgrounds, etc., where the tendency to dispose of trash in the wrong places can be largely restrained by preventing accumulations of it. The effects of over-use, due to inadequacies of camp grounds particularly, are in the long run not much different from the effects of vandalism but can be cured only by developments which more nearly meet the requirements of the public.

One of the most disheartening examples of vandalism of the past year resulted in the destruction by fire of most of the Washingtonia palms in the 49 Palms Oasis, Joshua Tree National Monument. Two teen-age boys picked up near the scene of the fire admitted responsibility and were turned over to the San Bernardino County Juvenile Court.

An encouraging note, in the form of more effective control of wear and tear and of incidental vandalism, comes from Yellowstone National Park. The project started there in 1946 of protecting the thermal areas by the use of prefabricated wooden walks was continued during the summer of 1947. An additional 2,000 feet was fabricated during the past winter and was laid as soon as weather conditions permitted.

"It has been estimated," the superintendent of the park reports "that the wear on the formations, in the areas where these walks have been installed, has been reduced some 90 percent." Unfortunately no protection but an adequate ranger force, not yet provided, has been found against the widespread habit of visitors throwing rocks, trash and debris into the loveliest and most delicately colored of the pools.

Personnel management.—Though shortages of personnel handicap the central offices, and, in particular, the personnel office of the Director's Office, a significant and satisfactory development in the field of personnel management was the Civil Service Commission's acceptance of National Park Service recommendations that all park ranger positions be placed in appropriate grades of the clerical, administrative and fiscal (CAF) service. The conversion of these positions to CAF grades will be a major task of the personnel office this year. Headway was also made in converting a good share of war-service and temporary-indefinite employees to competitive status, and in terminating a large proportion of the remaining leaves of absence for military service and war work. There is evidence that much has been accomplished in the field in on-the-job training of seasonal and permanent employees, without the use of any additional funds for the

purpose, and without the benefit of guidance from any training specialist.

On the debit side, the personnel office has been severely hampered by the limitation imposed on the use of funds for personnel administration in the Interior Department. The effects have been most marked in position classification, where an impossible load has been thrown on a single position classifier. The result is a continually mounting backlog of classification actions which reflects adversely on all phases of personnel administration and upon the Service's work.

Personnel actions.—Important personnel actions during the past year include the following:

Retirements: John R. White, Superintendent, Sequoia and Kings Canyon National Parks; Joseph Mills Hanson, Custodian, Manassas National Battlefield Park.

Appointments: Daniel B. Beard, Superintendent, Everglades National Park; Marshall H. Jones, Consultant, Concessions Division; James B. Robinson, Assistant Chief, Concessions Division.

Promotions: James L. Bossemeyer from Park Planner, Region Four, to Chief, United States Travel Division; John B. Doerr from Assistant Chief Naturalist to Chief Naturalist, Director's Office; Paul R. Franke from Assistant Chief, Concessions Division, to Assistant Chief Naturalist; Preston P. Patraw from finance officer, Director's Office, to Associate Regional Director, Region Three; Keith Neilson from Chief Accountant to Finance Officer; Ben H. Thompson from Assistant Superintendent, Lake Mead Recreational Area, to Special Assistant to the Director; Allyn F. Hanks from Chief Ranger, Grand Teton National Park, to Superintendent, Theodore Roosevelt National Memorial Park; Fred J. Overly from Assistant Superintendent, Olympic National Park, to Chief, Real Estate Branch, Division of Land and Recreational Planning, Director's Office.

Transfers: Dr. Carl P. Russell from Chief Naturalist, Director's Office, to Superintendent, Yosemite National Park; Frank A. Kittredge from Superintendent, Yosemite National Park, to Chief Engineer, Director's Office; Frank L. Ahern from the Office of the Secretary to his former position of Chief, Safety Office; Eivind T. Scoyen from Associate Regional Director, Region Three, to Superintendent, Sequoia and Kings Canyon National Parks.

New Construction Greatly Limited

Physical improvements.—Major repairs and rehabilitation of existing facilities took approximately half of the funds appropriated during the past year for physical improvements. Little new construction could be undertaken. An appreciable amount of comparatively small, but urgent, structural and mechanical repairs was accom-

plished, where facilities had deteriorated beyond the point where such repairs could be undertaken in the course of normal maintenance. But many such jobs remain to be done.

The construction of new facilities was undertaken with the balance of the physical improvements appropriation—less than \$400,000. Most of these projects had to be small. Among those accomplished or under way, and not mentioned elsewhere, are award of a contract for a residence and attendant utilities at 20-Mile Warden Station in Great Smoky Mountains National Park; modernization of the electrical system at Perry's Victory and International Peace Memorial National Monument; award of a contract for a water main from Jersey City to Statue of Liberty National Monument, delayed pending receipt of material; and construction of a water-system project at Big Bend National Park. Plans have been completed and are ready for contract on a number of other such projects. In addition the Bocock Isbell House was renovated and reconstruction of the McLean House was started, with funds previously appropriated.

Roads and trails.—The few major road contracts programmed for the year are all either completed or under contract. These include 15 miles of grading and base-course surfacing, 48 miles of paving, and completion of one structure. Among individual projects are grading and base-course surfacing of the Cades Cove Road and a portion of the Bryson-Fontana Road, in Great Smoky Mountains National Park; grading and base-course surfacing of part of the Loop Highway and the South Approach Road, and paving a portion of the Loop Highway, in Yellowstone National Park; grading and base surfacing the Zion-Bryce Canyon National Parks approach road; paving a portion of the All-Year Highway in Yosemite National Park; paving a portion of the Generals Highway and the approach road in Sequoia-Kings Canyon National Parks; and completion of the underpass in Petersburg National Military Park.

At Badlands National Monument the road from Big Foot to Cedar Pass was surfaced; roads and trails were constructed in the various development areas at Lake Texoma Recreational Area and the entrance road and new parking area at the Home of Franklin D. Roosevelt National Historic Site were graded and surfaced.

On the parkways.—Parkway work completed or under contract included the grading and base-course surfacing of 50 miles of road and construction of 12 bridges on the Natchez Trace Parkway; 128 miles of paving, 25 miles of grading and base-course surfacing, 2 grade separation structures and a viaduct on the Blue Ridge Parkway; a bridge on the west-bound road connection and the grading of 1½ miles of road in the vicinity of Key Bridge on the George Washington Memorial Parkway.

The Statue of Liberty.—During the years of the National Park Service's custodianship of the Statue of Liberty National Monument, important improvements have been made there. Yet others long planned, but unstarted or uncompleted, call for the expenditure of more than \$2,000,000. As a result of aroused public indignation during the past year, \$500,000—more than a quarter of the total appropriated to the Service for physical improvements for 1949—has been earmarked by Congress for a start on developments needed to provide a satisfactory setting for Bartholdi's gigantic bronze figure and to effect other improvements called for in the master plan for the national monument.

Land Program Launched; New Areas Added to System

Laws authorizing the establishment of three new historical monuments, one historical park, and one national memorial were approved by the Eightieth Congress; a new national historic site was designated by the Secretary of the Interior, while establishment of another national monument awaits only the clearance of title papers. Meanwhile, thanks to an appropriation of \$200,000 for land acquisition in the 1948 appropriation, a small but encouraging start has been made toward solution of the complex problem of non-Federal lands within National Park System areas. Though no action was taken on proposed legislation which would authorize a long-range program for acquiring such lands, a favorable committee report on one such bill gives grounds for hope that definite action may be taken by the next Congress.

Mindful of the inadequacy of its means of caring for all responsibilities connected with the existing National Park System, the Service for some years has taken a conservative position with regard to the proposal of new areas. It is felt that only those areas should be added that are of such outstanding importance to the Nation as a whole, and so high in quality that their preservation is a matter of national necessity. In some cases, notably the recreational demonstration areas, the Service has advocated the elimination of properties not of national caliber.

New areas authorized or proposed.—Of 29 proposals for the establishment of new areas recorded during the past year, the great majority dealt with areas of historical rather than scenic character—a probable indication of heightened public concern with historic sites and the spreading threat of permanent loss of many of them. During the year, legislation to establish eight new national historical areas was introduced into Congress, and five of these were enacted into law.

On March 11, the President signed an act authorizing the establishment of a De Soto National Memorial in Florida. On April 28, he

approved the act which instructed the Department of the Army to turn over Fort Sumter in South Carolina to the Department of the Interior for administration by the National Park Service as a national monument. The transfer was effected in June. An act to establish the Fort Vancouver National Monument, in the State of Washington was approved on June 19. Acting upon the recommendations of a special committee, the Congress passed, and the President approved on June 28, legislation which authorizes the establishment of Independence National Historical Park, in the heart of Philadelphia. This act also authorized the appropriation of \$4,390,000 to carry forward the project, though no appropriation has yet been made. Another act, passed near the close of the regular session and approved on July 2, authorizes the establishment of the Pensacola National Monument, to include several historic forts, subject to a determination that the sites possess sufficient national significance to warrant monument status.

On the three proposals on which no action was taken, the Department had submitted adverse reports.

Progress on authorized projects.—An authorized project since 1935, Kennesaw Mountain National Battlefield Park, Ga., was established upon designation of its boundaries by Secretary Krug on October 25, 1947.

Title to historic Hampton, purchased with funds donated by the Avalon Foundation, was accepted on April 5, 1948. An order designating it as a national historic site was approved by the Secretary on June 22. The property will be maintained and exhibited to the public by the Society for the Preservation of Maryland Antiquities, under a cooperative agreement.

Title papers have been received covering 1,000 acres of land donated by the State of Iowa for Effigy Mounds National Monument. As soon as title has been accepted by the Government, a proclamation to establish the monument will be submitted to the President.

In furtherance of the Coronado International Memorial project, Service officials conferred in Mexico City with representatives of the Federal Government. As a result, members of the International Park Commission of Mexico are seeking to have issued a decree establishing the Coronado International Memorial in Sonora. This step is necessary, pursuant to the act of August 18, 1941 (55 Stat. 630), before the United States can act to establish its portion of the memorial.

Cumberland Gap National Historical Park, in Kentucky, Virginia, and Tennessee, may possibly be established in 1949. Acquisition programs in Kentucky and Tennessee are completed except for a few tracts that have involved rather out-of-the-ordinary difficulties, but both States are hopeful of an early solution. Virginia has completed

approximately 50 percent of her purchase program, and funds are available for the acquisition of much of the remainder during this calendar year.

Saratoga National Historical Park, N. Y., was finally established under an act of Congress approved on June 22 to include the lands deeded to the Federal Government by the State of New York and those acquired by Federal purchase since the park was authorized in 1938. Funds have been insufficient to acquire all the lands specified in the 1938 act.

The first year of the Everglades.—Established on June 20, 1947, Everglades National Park was dedicated at Everglades City, Fla., on December 6, 1947. With John D. Pennekamp, Legislative Chairman of the Everglades National Park Commission, as presiding officer, the speakers included the President of the United States, Senators Claude Pepper and Spessard Holland and Governor Millard Caldwell of Florida, and Secretary Krug. Preceding the broadcast portion of the ceremonies, the Director of the National Park Service accepted from the Florida Federation of Women's Clubs the tender of the lands embraced in Royal Palm State Park, to be added to the national park.

During the year, a long start was made on establishing an administrative and protective staff for the park. It is well balanced, and all members of it have contributed many hours of overtime to the effort to make the park a "going concern." Plant and animal life is already responding to the greater degree of protection against fires, hunting, and the collecting of orchids and other rare and unique flora.

A great amount of study has been given to the area and its needs, and a preliminary plan of development has been drawn. Because of its possible effect on land values and the land purchase program, the plan has not yet been made public.

In spite of poor road conditions, well advertised in the newspapers, and lack of accommodations, about 22,000 persons visited the park during the 1947-48 winter season. As rapidly as funds are made available, development plans to provide for public use will be carried out. At the present time little provision of this sort has been made.

During this first year of administration of the park, the cooperation of the State of Florida and of county agencies, local groups and individuals has been unceasing, and extraordinarily generous and varied.

Touro Synagogue dedication.—Touro Synagogue in Newport, R. I., designated as a national historic site on March 5, 1946, was dedicated as such on August 31, 1947. Dedication speakers included the Honorable Joseph W. Martin, Speaker of the House of Representatives;

United States Senator Theodore Francis Greene, of Rhode Island; the Right Reverend Gaylord Bennett, of the Episcopal Diocese of Rhode Island; the Reverend Dr. David de Sola Pool; Gov. John O. Pastore, of Rhode Island; and Dr. Carl Van Doren, of New York City.

Acquisition of inholdings.—One of the most important and encouraging items in the 1948 appropriation was that of \$200,000 for land acquisition. At the end of the fiscal year, these funds had been 90 percent obligated. Purchases consummated or in progress include approximately 13,000 acres of Southern Pacific lands in Joshua Tree National Monument, purchased at about 75 cents an acre; an important parcel of privately owned land on the south rim of Grand Canyon; the only remaining parcel of private land in Arches National Monument; and the actual site of Cornwallis' Surrender in Colonial National Historical Park. Condemnation proceedings were also entered into to acquire the lands needed to establish the George Washington Carver National Monument, Mo., as directed in the act of July 14, 1943 (57 Stat. 563).

That Congress now realizes the desirability of consolidating Federal holdings in the National Park System is shown by the fact that the 1949 appropriation again contains an item of \$200,000 for land acquisition. Of greater long-range significance to the Service, however, are the provisions of House bill 6767 and Senate bill 2132, which, in addition to providing a return of revenue to the States in lieu of taxes on property removed from the tax rolls, would authorize the appropriation of \$20,000,000, at a rate of \$1,250,000 annually, for the purchase of inholdings. House bill 6767 was approved by the House Public Lands Committee a few days before adjournment but it was not acted upon further.

The \$2,000,000 contribution by the State of Florida has made it possible to launch the Everglades National Park program of land purchase. The title situation in the Everglades, much of which is unsurveyed, is extremely complex. However, two key tracts in the process of development have been purchased. In addition, substantial progress has been made on clearing title to the approximately 4,000 acres of Royal Palm State Park. It is hoped that 1949 will see mutually satisfactory contracts entered into for the purchase of a major portion of the acquisition area.

Wind-up of recreational demonstration area transfers.—The transfer of three recreational demonstration areas to States, under authority of the act of June 6, 1942—Camden Hills to Maine, Mendocino Woodlands to California, and Silver Creek to Oregon—during the past year virtually concluded the Service's program of disposing of 46 such areas in 24 States. Final disposition of only one area and part of

another remains to be effected. Catoctin, in Maryland, site of the retreat of President Franklin D. Roosevelt and President Truman, for as long as it is used for this purpose, is scheduled for transfer to National Capital Parks. It would be transferred to the State of Maryland should its use as a Presidential retreat be discontinued. Approximately a third of the Custer area in South Dakota is to be transferred to the State upon enactment of State legislation authorizing conveyance of certain lands to the United States.

The recreational demonstration areas, which contained 397,056 acres, were acquired in 1934-35 at a cost of approximately \$4,500,000 of National Industrial Recovery Act funds, and were developed with funds and manpower made available through various emergency agencies. In 1936, the Service was given full responsibility for their development and management. Except for a few of the areas acquired for addition to the National Park System, the projects were intended to be demonstrations of the possibilities of transforming lands no longer suitable for agriculture into recreational areas serving large population centers. Their development was planned primarily to provide facilities for organized camping for use by welfare and character-building agencies, but day-use facilities were also provided wherever practicable.

Disposition of recreational demonstration areas

[Acreage indicated by figures in parentheses]

<i>Area</i>	<i>Disposition</i>
Acadia, Maine (5,611) ---	Added to Acadia National Park by act of June 6, 1942.
Alexander H. Stephens, Ga. (940).	Transferred to State, Jan. 29, 1946.
Badlands, S. Dak. (43,500).	Included in Badlands National Monument by Proclamation of Jan. 25, 1939, pursuant to the act of June 26, 1936.
Beach Pond, R. I. (3,484) _	Transferred to State, June 28, 1943.
Bear Brook, N. H. (6,436) _	Transferred to State, May 12, 1943.
Blue Knob, Pa. (5,136) ---	Transferred to State, Feb. 1, 1946.
Blue Ridge, Va.-N. C. (10,585).	Included in Blue Ridge Parkway by act of June 30, 1936.
Bull Run, Va. (1,605) ----	Designated as a national historic site under the designation Manassas National Battlefield Park by Secretarial order of May 10, 1940.
Camden Hills, Maine (4,964).	Transferred to State, Mar. 5, 1948.
Catoctin, Md. (9,918) ----	Administered by National Capital Parks.
Cheraw, S. C. (6,825) ----	206 acres transferred to Fish and Wildlife Service, May 10, 1944; balance transferred to State, June 9, 1944.

Disposition of recreational demonstration areas—Continued

<i>Area</i>	<i>Disposition</i>
Chopawamsic, Va. (14,080).	Added to National Capital Parks System by act of Aug. 13, 1940. Transfer of approximately 5,000 acres to Department of the Navy authorized by act of June 22, 1948.
Crabtree Creek, N. C. (4,983).	Transferred to State, Apr. 6, 1943.
Cuivre River, Mo. (5,759) —	Transferred to State, Nov. 19, 1946.
Custer, S. Dak. (20,404) —	14,777 acres added to Wind Cave National Park by act of Aug. 9, 1946; remaining 5,627 acres will be transferred to State after enactment of State legislation authorizing conveyance of certain State lands to the United States.
Fall Creek Falls, Tenn. (15,777).	Transferred to State, Aug. 1, 1944.
French Creek, Pa. (6,198) —	214 acres established as Hopewell Village National Historic Site by Secretarial order of Aug. 3, 1938; remaining 5,984 acres added to site by act of June 6, 1942. Act of July 24, 1946, reduced site to 848 acres; remaining 5,350 acres reverted to RDA status and were transferred to State on Mar. 31, 1947.
Hard Labor Creek, Ga. (5,804).	Transferred to State, Jan. 29, 1946.
Hickory Run, Pa. (13,386).	Transferred to State, Feb. 1, 1946.
Kings Mountain, S. C. (10,147).	3,972 acres included in Kings Mountain National Military Park by Secretarial order of July 11, 1940; balance transferred to State, May 30, 1944.
Lake Guernsey, Wyo. (1,753).	Transferred to Bureau of Reclamation, June 8, 1943.
Lake Murray, Okla. (2,228).	Transferred to State, Feb. 20, 1943.
Lake of the Ozarks, Mo. (16,148).	Transferred to State, Nov. 19, 1946.
Laurel Hill, Pa. (4,026) —	Transferred to State, Feb. 1, 1946.
Mendocino Woodlands, Calif. (5,426).	Transferred to State, June 11, 1948.
Montgomery Bell, Tenn. (3,746).	Transferred to State, June 9, 1943.
Montserrat, Mo. (3,441) —	Transferred to State, Nov. 19, 1946.
Oak Mountain, Ala. (7,805).	Transferred to State, Apr. 30, 1943.
Otter Creek, Ky. (2,445) —	1,072 acres transferred to War Department, Aug. 29, 1944; remaining 1,373 acres, plus 395 acres surplus War Department lands acquired by Interior Department, transferred to City of Louisville, Oct. 15, 1947.
Pere Marquette, Ill. (2,522).	Transferred to State, May 7, 1943.
Pine Mountain, Ga. (3,032).	Transferred to State, Jan. 29, 1946.

Disposition of recreational demonstration areas—Continued

<i>Area</i>	<i>Disposition</i>
Raccoon Creek, Pa. (5,035).	Transferred to State, Feb. 1, 1946.
Roosevelt, N. Dak. (61,539).	Transferred to Fish and Wildlife Service, Feb. 25, 1946. 44,502 acres subsequently included in Theodore Roosevelt National Memorial Park by Public Laws 38, 620, and 631 (80th Congress); remaining acreage available for exchange to consolidate Federal holdings in the park.
St. Croix, Minn. (18,499).	Transferred to State, Sept. 27, 1943.
Shelby Forest, Tenn. (12,258).	Transferred to State, Aug. 1, 1944.
Shenandoah, Va. (10,129).	Added to Shenandoah National Park, June 6, 1942.
Silver Creek, Oreg. (4,093).	Transferred to State, June 26, 1948.
Swift Creek, Va. (7,605).	Transferred to State, May 31, 1946.
Versailles, Ind. (5,371).	Transferred to State, Apr. 20, 1943.
Waterloo, Mich. (11,830).	Transferred to State, June 15, 1943.
Waysides, S. C. (228) (6 areas).	Transferred to State, June 9, 1944.
Waysides, Va. (206) (6 areas).	Transferred to State, Mar. 26, 1943.
Winamac, Ind. (6,233).	Transferred to State, Apr. 20, 1943.
White Sands, N. Mex. (1,719).	Added to White Sands National Monument by act of June 6, 1942.
Yankee Springs, Mich. (4,197).	Transferred to State, June 15, 1943.

Threats to Parks and Monuments

Past reports have told of the pressure to break down national park policies, notably in the case of Jackson Hole National Museum and Olympic National Park.

Though no action was taken on the proposal to abolish Jackson Hole National Monument or to shrink the boundaries of Olympic National Park, legislation on both on these matters seems certain to be introduced and considered by the Eighty-first Congress. Related in character to these threats are several proposals to invade park areas with water impoundments, either by the Bureau of Reclamation or the Corps of Engineers. No less serious are the alien developments being imposed on such areas as Gettysburg National Military Park and Colonial National Historical Park because of the fact that lands of major historical importance inside these parks are still in private ownership and open to exploitation. It is pleasant, however, to record that the State of Virginia has appropriated \$17,000 to be expended with matching Federal funds to acquire the valuable Stone House property, for addition to Manassas National Battlefield Park.

The Jackson Hole and Olympic controversies.—House bill 1330, which, as reported out of committee, would abolish the Jackson Hole National Monument, by transferring approximately 40,000 acres to

Grand Teton National Park and adding the rest to Teton National Forest, failed of passage in the last Congress. It was taken off the Consent Calendar of the House after being objected to on two different occasions, and did not come up again. A similar Senate bill 1951, and a proposal to abolish the monument through amendment of the Antiquities Act of 1906, embodied in Senate bill 91, were not considered.

Hearings on the several pieces of legislation relating to the boundaries of Olympic National Park were held at Lake Crescent last September by the House Committee on Public Lands. It was expected that there would be further hearings in Washington, D. C., in order that the viewpoint of individuals and organizations in the East might be presented. No further hearings were held, however, nor were any of the several bills reported out by the committee. Concurrent resolutions, introduced in the House and Senate comparatively late in the 1948 regular sessions of Congress, provided for a joint committee, composed of three members each from the two bodies, to determine what boundary reductions should be made. Neither was acted upon. It is apparent, however, that the endeavor to make extensive reductions will be renewed in the Eighty-first Congress.

That the Jackson Hole National Monument still stands—though handicapped by continuance of the prohibition against the use of appropriations to administer it as a monument; and that none of the Olympic boundary proposals were acted upon, is due to the active interest of conservationists from one end of the country to the other; and none were more active and effective than those of the West itself.

Dams versus parks.—A number of water development proposals seriously threaten the integrity of national parks. The National Park Service recognizes the desirability of fuller utilization, within the limits of long-term economic soundness, of the water supplies of the Nation and of effective measures for the control of floods. Many proposals for flood control, hydroelectric and reclamation impoundments, however, contemplate the invasion of parks and monuments, and the Service is obliged by law, by general public opinion, and by its own convictions, to defend these areas as vigorously as it possibly can, unless an overwhelming showing of national necessity can be made. In connection with many flood-control proposals, the Service shares with numerous conservation organizations serious doubts as to the permanent efficacy of such dam construction, and feels that more attention needs to be directed to remedying the primary causes of floods, the destructive denudation of forested watersheds, unsound agricultural practices, the failure to apply erosion controls, and conditions at the headwaters of streams. Conservationists and conservation groups have united in defending National Park System areas

against construction of dams until there can be a full appraisal of their damaging effect in a weighing of this loss against the benefits claimed.

A legislative proposal before the Eightieth Congress would have provided for construction, by the Bureau of Reclamation, of the Bridge Canyon Dam on the Colorado River above Lake Mead. Its construction would mean that the inner canyon of Grand Canyon National Monument would be greatly reduced, seriously impairing the feature which was the primary reason for establishing the monument. At the maximum elevation of the proposed reservoir, 18 miles of Grand Canyon would be flooded along the park boundary.

Another and still more dangerous proposal is for the construction of a 54-mile tunnel, to divert the major portion of the Colorado's waters under the Kaibab Plateau to a power plant near the mouth of Kanab Creek, just above the headwaters of the proposed Bridge Canyon Dam. The flow of the River through the park—its most significant single feature—would be reduced to a small fraction of its normal volume.

Glacier National Park is likewise threatened. The Corps of Engineers is considering the construction of a dam at Glacier View, on the North Fork of the Flathead River, Mont., to which the National Park Service is strongly opposed. This opposition has been made clear by public announcement and by statements issued at the public hearing held under the auspices of the Corps at Kalispell, Mont., on May 25. The Service is supported in its stand by virtually every conservation organization in the country. There is, furthermore, a large volume of local opposition.

The proposed Glacier View Dam would flood more than 19,000 acres of superb wilderness area and destroy a major portion of the winter habitat of the park's big game animals. The effect on wildlife would, consequently, extend over an area of the park many times greater than the area to be flooded. Second possibly only to Yellowstone, Glacier is noted for the number and variety of its big game. Within the area to be flooded are approximately 8,000 acres of virgin forest, as fine as any the park contains.

In opposing the Glacier View project at the hearing, the statement from the Director of the National Park Service contained the following:

Civilization is encroaching on the wilderness all over our land. What remains of it becomes increasingly precious to present-day Americans, and will be in even greater degree to Americans of the future. Here, threatened with permanent destruction, is an extraordinarily fine example of "Original America." We cannot afford, except for the most compelling reasons—which we are convinced do not exist in this case—to permit this impairment of one of the finest properties of the American people.

In the interest of protecting Mammoth Cave National Park, both the Department and the National Park Service have protested vigorously against the proposal of the Corps of Engineers to construct a flood-control dam at Mining City, Ky., on the Green River, which would cause flooding of a portion of Mammoth Cave, entailing great damage. The park was purchased by Kentuckians at a cost of approximately \$3,000,000 and was accepted by the Federal Government on the understanding that its unique features would be fully protected.

Developments encroach on parks.—Insufficiencies of land ownership in the historical areas of the National Park System still present discouraging problems of adverse and undesirable use. At Gettysburg, for example, guns which formerly pointed across open fields, as they did during the battle, are now pointed squarely at a newly constructed residence. A community generally known as Slabtown still forms a wedge into the Yorktown Battlefield, in Colonial National Historical Park, crossing the first and second American parallels, works constructed by the Colonial forces in prosecuting the siege. Similar examples are to be found in other areas.

Progress in Research, Interpretation, and Information

One of the most important functions of the Service involves the activities of the naturalists and the historians in revealing to the public the meaning and significance of national park areas.

By making the most effective possible use of available funds and personnel, the National Park Service during the past year has made many noteworthy forward steps in interpretation and in the research on which satisfactory interpretive activities must be based. A corollary has been the increased use of the parks and monuments for research by universities and other outside groups and agencies—an activity from which the Service and the public benefit. Both in history and prehistory and in the natural sciences, Service-administered areas offer unique opportunities for research. Particularly valuable are the natural areas in which a primary obligation is the maintenance of normal relationships of plant and animal life. The areas in which these conditions continue to exist are becoming increasingly scarce, since elsewhere commercial development is rapidly changing the face of the American landscape.

Yosemite school reopens.—Important because of its influence on effective interpretation is the reopening of the Yosemite School of Field Natural History—the first held since before the war—which got under way late in June. Shortages of staff had extended its wartime suspension through 1946 and 1947 and while such continue this year, the great value of the school in providing the special training

needed for natural history interpretive work in the National Park System induced the decision to resume operation, even though it was recognized that it would add greatly to the burden of the Yosemite naturalist staff.

The carefully selected students are being given full opportunity to participate in actual naturalist work with park visitors, campfire talks, conducted walks, etc., and receive a thorough grounding in fundamental Service policies and administrative practices.

Closely related in character was the Region Four naturalist conference held at Yosemite in April, the first such gathering in any region since 1941. It is planned to hold a similar conference in at least one region each year hereafter.

Archeology.—Though archeology is ordinarily considered to be concerned with prehistory, the most newsworthy archeological accomplishment of the Service during the past year was that at Fort Raleigh National Historic Site in North Carolina. There the second period of digging resulted in the definite determination of the location, extent and character of the fort built by the Raleigh colonists on Roanoke Island. This work, and the preliminary archeological explorations at Fort Frederica, Oglethorpe's southern outpost on the Georgia coast, at Whitman National Monument, at Fort Vancouver, authorized as a national monument, and at the Bynum site on the Natchez Trace Parkway, are the subjects of papers prepared for professional journals and are of considerable interest to archeologists. Articles dealing with the combined historical and archeological research on Jamestown Island, Colonial National Historical Park, have also been prepared for publication.

An archeological project carried on at Homestead National Monument, Nebr., last spring made possible the determination, beyond a reasonable doubt, of the Freeman cabin site on the "first homestead." Investigation begun in the basin to be inundated by Davis Dam, downstream from Hoover Dam, on the Colorado, was suspended last winter when the General Accounting Office ruled that the working fund set up by the Bureau of Reclamation could not be used for that purpose. This area is a part of the Lake Mead Recreational Area.

A research group from the University of Colorado faculty and museum personnel was organized, with collaborator status, to engage in archeological investigation and to gather biological and ecological data on Dinosaur National Monument, Utah and Colo. Their work will provide an inventory of the natural values that are imperiled by the proposal to dam the Green River at Echo Park, while cultural evidences of the early inhabitants of the Green and Yampa River Canyons will be preserved and studied.

Under departmental permit, Dr. Deric O'Bryan conducted an important archeological investigation, sponsored by the Gila Pueblo

Foundation, Globe, Ariz., at two sites in Mesa Verde National Park. The material removed from the sites, consisting of early Pueblo material covering a span of about two centuries, was cleaned, repaired, photographed, and studied at Gila Pueblo. Except for a small representative collection retained there in accordance with the terms of the permit, all the material has been returned to the park. The permit has been extended and other sites are being investigated this season. Other student parties, under competent direction, worked also at Bandelier and Chaco Canyon National Monuments.

Museums.—With a small, highly skilled staff, the Museum Branch, with a laboratory and workshop at Fort Hunt, Va., has been engaged mainly in the preparation of exhibit material for the fine museum building at Manassas National Battlefield Park, and for similar museums at Kings Mountain, Guilford Courthouse, and Chickamauga and Chattanooga National Military Parks.

Pending the erection of a structure specifically for the purpose, the Oconaluftee Ranger Station, near the main North Carolina entrance to Great Smoky Mountain National Park, was successfully converted last spring into an interim museum of pioneer culture. This museum provides the North Carolina portion of the park with an important focal point of interest. A temporary museum has also been established at Fort Raleigh National Historic Site.

Other items which mark definite progress in the Museum program include the completion of prospectuses for much-needed museums at Custer Battlefield National Monument, Mont., Chaco Canyon National Monument, N. Mex., and Fort Pulaski National Monument, Ga.; the completion of a colorful series of paintings on Indian Government and Seasonal Ceremonials, for the Bandelier National Monument, N. Mex., museum by Mrs. Pablita Velarde Hardin, noted artist from the Santa Clara pueblo; generous gifts of valuable historical material to the Morristown National Historical Park, N. J., museum by the Washington Association of New Jersey and Mrs. Paul Moore, of Convent, N. J.; the gift to Saratoga National Historical Park, N. Y., of a fine collection of relics pertaining to the Saratoga battles by Louis E. Follett, of Schuylerville; the signing of a contract for construction of the William H. Jackson wing of the museum at Scotts Bluff National Monument, for which funds have been donated by Julius Stone and by the American Pioneer Trails Association; and a start on the work of stabilizing the Cyclorama at Gettysburg, for which \$10,000 was appropriated by Congress. The Cyclorama was badly in need of repairs when acquired by the Service in 1942, but none could be undertaken during the war years.

Stabilization of historic and prehistoric structures.—Although stabilization problems have not been wholly solved at such ancient structures as the mission at Tumacacori National Monument, Ariz., or the

still older pueblo ruins of the Southwest, the past year has seen steady progress in arresting the deterioration of some of the most interesting and significant of these structures.

At Tumacacori, portions of the painted plaster on the church facade are so weakened by the deterioration of material underneath that conventional stabilization methods cannot be applied to them. However, extensive repairs have been successfully made elsewhere in the structure. All of the church exterior except two walls of the sacristy have been given permanent stabilization, and other related work is continuing.

Active stabilization work was carried on with satisfactory results at Casa Grande, Canyon de Chelly, Hovenweep, Aztec Ruins, and Bandelier National Monuments, and at Cliff Palace, Spruce Tree House and Square Tower House at Mesa Verde National Park, Colo.

At the beginning of the 1948 fiscal year, stabilization of the great Chetro Kettle ruin at Chaco Canyon National Monument, N. Mex., was 90 percent complete. Less than 2 months later a disastrous flood destroyed 25 rooms and put 6 to 8 feet of debris into all others that had been excavated below ground level. The rest of the year was spent repairing this damage—so far as it was repairable—and in completing small but urgent repairs at Pueblo Bonito and Pueblo Alto, in the same monument.

In addition, badly needed repairs were given several important historic structures. The ancient footings of the Castillo de San Marcos, badly eroded by tidal action, are being successfully stabilized. Groins have also been rebuilt to protect Fort Matanzas against wave action. Old Bedlam at Fort Laramie National Monument has undergone extensive repairs. Equally extensive repairs to the Bocock-Isbell House at Appomattox Court House National Historical Monument, for occupancy by the custodian, are also under way.

Informational publications.—As had been the case ever since the end of the war, funds for the printing of informational publications, so necessary to park visitors, fell far short of need. During the past year, every effort was made to spread the available publications funds, approximately \$46,000, as far as they would go. Some items were cut in size to the point where at least a part of their intended usefulness was curtailed. Yet for a visitation in excess of 25,000,000 it was possible to provide only about 3,000,000 pieces; some major areas were without literature throughout much or all of the season of heaviest travel.

Although the increased printing funds for the 1949 fiscal year will not permit much, if any, relief for this situation during the present vacation season, they will be enough to permit somewhat more adequate supplies to be produced for the next travel year. The limiting factor on production is personnel, since the editorial staff of the In-

formation Division is no greater than it was for a publications program of approximately one-third of the prospective 1949 volume.

Matters pictorial.—A contribution of funds by the Atwater Kent Foundation and of his highly expert services by Ted Phillips, for several years chief photographer for Burton Holmes, made it possible this spring for Mr. Phillips to embark on the making of a sound-and-color motion picture of Yosemite National Park. This picture, scheduled for final completion late this summer, will not only tell the fascinating geological story of the park but will also show the manner in which the area is administered by the Service and the ways in which it is used by the public.

The parks and monuments seem to appeal, more than ever before, to both professional and amateur photographers. Ansel Adams, working under a Guggenheim Foundation grant, has continued his comprehensive program of both black-and-white and color photography of the parks, including those in Hawaii and Alaska. Ralph E. Gray, one of the foremost amateur cinematographers, is making an extensive motion picture series which will deal largely with the national parks. Ray Garner, working under a grant from the Harmon Foundation, is continuing his program of producing "Portraits in Music" for which national park and monument color motion pictures provide the pictorial background. Numerous other commercial and noncommercial agencies are engaging in the production of pictures on national park subjects.

The Service would like to be in a position to produce, or arrange for the production of, a series of up-to-date motion pictures of the parks and monuments, of professional quality. However, neither its present nor its prospective means would permit that. It recognizes the value of motion pictures produced by or through other agencies, works as closely as possible with those who take them, and extends the fullest possible assistance, through the staffs of the Director's Office and the field services of the Service.

Closely related to motion-picture activities is a project, under negotiation at the end of the year, for the commercial production of "film strips" in color on a wide variety of park subjects, primarily for use in schools. Such material, accompanied by accurate printed information, seems likely to offer an effective and inexpensive means of reaching school and related audiences, groups which should have a good fundamental understanding of the people's park system.

Interpretive services.—Demands for interpretive services have increased at least in proportion to the increased number of visitors, but without a proportionate increase in interpretive personnel. Thus we have such situations as that at Spruce Tree Ruin, in Mesa Verde National Park, where one person must guard against vandalism and explain the ruin to as many as 300 persons in a 4-hour period. Groups

accompanying ranger naturalists on guided walks are frequently so large that it is virtually impossible to provide them with satisfactory service.

In Washington during the past spring more than 5,000 school groups visited the Washington Monument and other points of interest in the National Capital Parks. Special provision was made to give orientation talks to these groups so that their time in the Nation's Capital could be spent to best advantage.

Concessions

One aspect of the work of the Service is particularly open to public notice, and if inadequate is quickly subject to adverse comment. This is the system of concessions under which hotels, lodges, meals, stores, and transportation are provided. Since the war such provision has fallen far behind the need and the demand.

Congressional and other criticism of the operation of concessions in the national parks resulted, as noted in last year's report, in the appointment of a five-man concessions advisory group by Secretary Krug, to make a detailed and objective study of all phases of the concession problem. This was of necessity a time-taking task. During its progress it was felt necessary to hold in abeyance decisions as to future policy, in order that, in reaching them, the Department might have the advantage of the group's study and the recommendations based upon it. Though this procedure was basically sound, one of its adverse effects was to leave present concessioners in a state of uncertainty as to the conditions under which they would be permitted to operate in future and, in particular, as to whether or not existing or already expired contracts would be renewed. This in turn has deterred them from embarking on extensive, and much needed, programs of modernization and expansion of facilities.

A final determination of the Department's policy in the near future and the framing of a type contract should make it possible to undertake negotiations on the 22 contracts which have already expired or which will expire at the end of this calendar year and, once these are settled, enable the concessioners to proceed with overdue construction, when materials and labor become available.

Advisory group approves major concession policies.—The concessions advisory group, after an intensive study of concession problems and practices extending over more than a year, submitted its report to Secretary Krug on February 19, 1948. In multilith form, this report has been given wide distribution and has been closely studied by Department and National Park Service officials preliminary to the formulation of a revised statement of the Secretary's concession policy,

and a new concession type-contract to provide a basis for negotiating new contracts as present ones expire.

Particularly gratifying to the Service is the conclusion of the group that the policies and practices evolved through 31 years of experience with concessions operations in the national parks are in most major respects sound and in the public interest. The report, rendered after searching and dispassionate study of every phase of these operations by five highly qualified men, contains many constructive suggestions for improvement of methods of handling concessions and of service to the public. Some of these can be put into effect at once, while others, such as the recommendation that the Concessions Division be adequately staffed, are dependent on Congressional appropriations.

The following are major recommendations found in the report:

That, while preservation of the values for which the parks were created is a primary requirement, access should be restricted only to the extent necessary to assure this preservation; and that all developments should be as inconspicuous and as harmonious with their surroundings as possible.

That accommodations should be provided for the public in the parks only on the basis of definite need, since there is nothing in the act which established the National Park Service to indicate that Congress intended the parks to produce a revenue to the Government or to offer private enterprise an opportunity to make money.

That, in the long run, Government ownership, but not Government operation, of basic concession facilities is in the public interest and that Congress should establish a definite policy of acquiring and maintaining such facilities.

That contracts should be awarded to selected operators on the basis of known qualifications—not only as to adequate financing and business judgment, but as to sympathy with the objectives and policies of the National Park Service.

That in general the present policy of granting, subject to Government regulations, contracts to a single concessioner for all operations in a given area is sound in view of the large investments required in many national parks, the hazards involved in many concessions operations, and the need for adequate and continuous service to the public. The group found that past concessions have not yielded excessive profits.

That while "service at cost" (with a reasonable return on investment included as an item of cost) is recommended as sound in principle, it is not actually practicable; that a franchise fee should therefore be provided and should be levied against net profits; that the concessioner should be permitted a fair minimum return on investment (6 percent

is suggested) ; and that the franchise fee should be levied, on an ascending scale, on profits in excess of the fair minimum return. The group recognized that in prosperous years, concessioners should be allowed a fair percentage of the extra profits to offset the occasional lean years.

“Many of the facilities provided by the Government, as well as the personnel, are taxed beyond capacity,” the report declares. “All this results in situations for which the Service is often criticized but over which it has little control. The concessions advisory group feels that much of this criticism would not arise if the appropriations for the Service were more nearly commensurate with responsibilities placed upon it and the public service expected from it.”

Since the report was issued, Secretary Krug has determined that, though satisfactory service by a concessioner would weigh heavily in decisions as to renewal of contracts, public notice of expired or expiring contracts is to be given and that proposals from others shall be given consideration.

At a hearing before the House Subcommittee on Public Lands in June, concessions policies, existing and proposed, were the subject of questioning of departmental and Service officials. Attention was particularly directed toward the proposal for Government ownership of basic concession facilities as a long-term aim and objective of the Department and the Service, and approved as such by the concessions advisory group. The reasons for advocacy of it were discussed at some length in the annual report for 1946. It may be added that public ownership of such facilities is established practice in the State parks of virtually every State in which they exist, and considered desirable by them for reasons in general identical with those which appear to justify Federal ownership of national park facilities.

Concessions Division staff insufficient.—The National Park Service, like the concessions advisory group, has long recognized the need of a greater degree of supervision over concession matters and of continuous study directed toward better service to the public. The Concessions Division should be in a position to analyze all financial aspects of the concessions, study the management methods applied to them, analyze the details of operations to determine trends of public use and demand in order to plan intelligently for the future, and supervise operations sufficiently to see that sanitary and safety measures are enforced and to make certain that the public is well and courteously served at all times.

This has never been possible because of the meager staff which must handle all phases of the Service's concern with concessions operation. Though repeatedly requested, there have never been granted sufficient funds for personnel to do the work required to keep the business current, to say nothing of conducting worthwhile studies, analyz-

ing operations or giving adequate supervision. Even the audits of the concessioners' records, on which franchise fees are determined, are far from up-to-date; and this situation has been aggravated by the necessity of using auditors to a considerable extent to clear urgent administrative work concerned with concessions.

Many of the concessions advisory group's excellent recommendations cannot be carried out without additional appropriations. To base the approval of rates on the cost of providing service, for example, would require not only keeping audits current, but also study and analysis of detailed annual reports to ascertain which rates should be reduced, increased, or left undisturbed, the gathering of rate data in the vicinity of the parks and a determination as to whether the rate structures of concessioners were consistent with service furnished and with rates in the vicinity and with other concessions. For all these tasks; for satisfactory supervision of concessions operations; for the preparation of data with which to keep the Bureau of the Budget and the Congress informed on concession matters; and to perform the normal administrative functions required in connection with some 250 concessions, with an annual gross revenue of more than \$25,000,000, there is a staff of 13 positions in all grades in the Director's Office and one auditor in each of the four regional offices. This force is wholly inadequate for the extensive and complex responsibilities resting on the Concessions Division.

Service of concessioners improves.—Though the volume of travel to the parks has shown a marked increase over last year, which was far higher than during any prewar year, it is gratifying to note that better service has been given the visitor. Concessioners have been able to enlist a better type of personnel, a greater percentage of their seasonal employees have had previous experience with them, and they have had less difficulty in obtaining needed materials and equipment. All of these factors have been reflected in improved service. Rates charged the public have been closely comparable to those charged for similar services elsewhere, and in many cases have been lower. There has been definite progress in rehabilitation and improvement of facilities, though they have not yet in all cases been brought up to standard; and little expansion has been possible.

Rehabilitation since the war has been hindered by shortages of materials, equipment, and labor, with some important materials still in short supply, and by short work seasons in the snow parks. Provisions for sanitation and safety have been stressed, however. Reference is made elsewhere to the various measures taken to assure greater safety from fire in the larger hotels throughout the system. Some needed sprinkler systems, unfortunately, must wait upon enlarged Govern-

ment appropriations with which to install more adequate water supplies.

Rehabilitation and improvement of existing facilities, rather than additions to them, has been the Service's first objective. The Fred Harvey Co. has added hot and cold running water in some 90 cabins in the cabin camp on the south rim of the Grand Canyon and has added baths to 40 others. Some 60 cabins with bath at Lake, in Yellowstone National Park, begun before the war, are nearing completion after a long wait for plumbing fixtures. There has been some expansion in other areas, but of no great extent.

Plans are in progress for major concession developments at Thumb, in Yellowstone National Park and at Yosemite Lodge, Yosemite National Park. The character of the proposed Thumb development has been indicated elsewhere. In Yosemite, it is proposed to construct a new central unit at Yosemite Lodge, and to convert many of the present cabin-type sleeping accommodations into larger 2-story lodging units. At both locations, and at others where expansion is planned, the installations of utilities by the Government must be timed with the building by the concessioners.

Temporary concession employees given special training.—The average visitor makes little distinction between Government and concessioner employees. It is, therefore, particularly important to the Service, and the visitor, that those employees of the concessioners who come in contact with the public not only be trained to render courteous, intelligent service, but that they also possess at least basic information about the park in which they work, and about the National Park Service and the way it functions. Increased effort has been exerted during the past year by both concessioners and the Service to provide training along these lines, through numerous meetings, and a number of the concessioners have issued printed matter to supplement these. The intent is to reduce to a minimum justified complaints, based on lack of information or wrong attitude. This is by no means easy since it is necessary to train a large number of new employees each season. However, the return to the parks of more employees with previous experience, and the more intensive effort to train new employees has resulted in more intelligent, attentive, and considerate service to the public. Considering the tremendous numbers served, the number of complaints has been very low.

Expiring concession contracts.—This year found the Service with 22 concession contracts which have already expired or will expire before the end of the calendar year. Some of these expired during the war and have been extended on the original terms from year to year, because of the uncertainties of postwar conditions. Negotiations preliminary to the signing of new contracts were further postponed to

await the results of the studies of the Concessions Advisory Group. Their report having been submitted and the major features of the Secretary's policy having been outlined, the Concessions Division is now proceeding with contract negotiations. In connection with expired or expiring contracts, an opportunity is being given other interested parties, as well as the current concessioners, to make proposals.

The Mount Rainier Operation.—Legislation (H. R. 2312) was introduced in the Eightieth Congress which, if approved, would authorize Government purchase of the assets of the Rainier National Park Co., which has supplied accommodations at Mount Rainier National Park since 1916. It was introduced on petition from the company which, having operated on the whole at a loss, is unwilling and unable to replace its present old and inadequate plant. Although hearings were held in the park last September and in Washington, D. C., in May and June by the Subcommittee on Public Lands of the House Committee on Public Lands, the committee took no action on the proposal.

The company's present contract expires on December 31, 1948. It was organized and financed by public spirited citizens of Seattle and Tacoma through the solicitation and encouragement of Stephen T. Mather, the first director of the National Park Service. It has made a considerable investment in the park and has rendered good service throughout the years.

Data have been prepared on the past operations of this concession and on the proposals for future development and operation, and efforts are being made to interest private capital in purchasing the existing plant, as provided in the present contract, and in providing the modernized and enlarged facilities which the park needs.

Reservoir Sites, Recreation, and Archeology

A relatively new function has added to the responsibilities of the National Park Service. At the request of the agencies concerned, for the past few years the Service has cooperated, on a very extensive scale, with the Bureau of Reclamation and the Corps of Engineers in identifying and evaluating the scenic, scientific, historical, and archeological features, as well as the recreational potentialities of reservoir sites. By agreement with the Smithsonian Institution, that agency attends to the archeological and paleontological phases.

Reports on the surveys and studies are submitted with appropriate recommendations to both the Bureau and the Corps. With the latter, generally no further assistance is required beyond occasional requests for review of master plans.

Reclamation, however, relies on the Park Service also for preparation of complete plans, supervision of construction, and negotiations with other agencies for operation and maintenance of recreational developments.

The creation of large bodies of water, particularly in semiarid regions where natural lakes are rare, profoundly affects the recreational habits of the neighboring community. Determination of the recreational suitability of a large number of sites, however, requires careful study. Estimates must be made of the number and kind of facilities needed. Plans for any new area must be integrated into a program which includes existing and proposed recreational areas of the community and of other Federal and State agencies.

With this as with many other tasks that the Service has been asked to undertake, the available staff is not adequate. During the year covered by this report, the Service was barely able to complete its scheduled program. Another year will bring greatly increased demands, due to the accelerated program of dam building, and yet, available funds will be smaller. Basin-wide recreational surveys, too long delayed because of the urgency of studying individual sites, should be started, but the necessary increase in working force is beyond realization. Furthermore, construction work and rising water pose the threat of irreplaceable loss of invaluable scientific data and material. For archeological excavation, which must be done now or never, adequate funds are urgently needed, and quickly. The Service did not seek the responsibilities involved in these studies and surveys, but feels that, if they are to be undertaken, they should be provided for in a manner in keeping with their importance.

The Missouri River Basin.—Continued studies of sites in the Missouri Basin resulted during the year in the production of 55 reconnaissance, project, and subbasin reports; 2 historical reports; an atlas of archeological sites within reservoir basins; and 27 evaluations of recreational benefits of reservoir sites. The Smithsonian Institution submitted 17 archeological and paleontological reports. Reports were submitted to the Corps of Engineers on the recreational potentialities of 5 reservoir sites in their program.

The Columbia River Basin.—During the latter months of the year, the Bureau of Reclamation's program required particular emphasis on the investigation of reservoir sites in the Columbia River Basin. Reports have been submitted to the Bureau on 9 reservoirs, with 11 more in preparation, and 3 to the Corps of Engineers. One master plan was completed. Nineteen reconnaissance reports, 25 project reports, and 15 master plans are due for completion this year, but cannot be completed without more funds and personnel.

Other basins.—Eleven reports were submitted to the Bureau of Reclamation on projects in other basins. Two cover reconnaissance

of the Blue-South Platte and the Gunnison-Arkansas transmountain diversion projects. They involved investigation of 25 dam and reservoir sites. The Corps of Engineers was furnished reconnaissance and planning (review) reports on 27 reservoirs.

The Colorado River Report.—The Service report on the comprehensive survey of the recreational resources of the Colorado River Basin, initiated in 1941 under an interbureau agreement, was completed and is now being edited for publication in the near future.

River Basin archeology.—Field operations of the Smithsonian, carried on according to the terms of their cooperative agreement with the Service, included archeological surveys of 38 reservoir areas in 18 States, 14 in the Columbia Basin alone; with 68 paleontological surveys and 4 archeological surveys in the Missouri Basin. Other important reservoir areas covered were Clark Hill, Ga.; Fort Gibson, Okla.; and Whitney-McGee Bend, Tex.

Archeological excavation was conducted mainly in the Missouri River Basin. At Medicine Creek Reservoir, Nebr., bulldozers and road patrols were used for the first time in this country in such work, to strip 1 to 3 feet of overburden from aboriginal occupation sites. Excavations there produced significant new data on the pre-Columbian inhabitants of western Nebraska and revealed evidence that their cultural existence was much earlier than hitherto suspected. Excavations in the Birdshhead Cave, Boysen Reservoir, Wyo., and on the Canadian River in New Mexico were also fruitful. Those at the Addicks Reservoir in Texas provided the first complete knowledge on the sequence of aboriginal culture in that region.

The existence of promising but unsurveyed archeological areas, revealed by the Smithsonian surveys, and the rich contributions to our knowledge of ancient peoples produced by the year's excavations, indicate something of the urgency of a continued and enlarged program for the salvage of archeological resources in the reservoir areas before they are inundated forever.

Reservoir development and management.—In July 1947, the National Park Service was designated by the Secretary of the Interior as the agent of the Bureau of Reclamation to plan and develop the recreational areas that have been or will be created by the impounded reservoirs of the Reclamation program, except those in national forests, which will be entrusted to the Forest Service. The Park Service will continue also to manage the areas adjudged to possess national significance. In addition, the Lake Texoma Recreational Area in Oklahoma and Texas continues under National Park Service management, by cooperative agreement with the Department of the Army.

Some idea of the magnitude of the Service's problems of development and management on these areas may be gained from the volume of attendance they attract. Lake Texoma is likely to show 2,000,000

visitors during the travel year, or more; Lake Mead and Coulee Dam together may have as many more. On all of them, development has not kept within hailing distance of demand, and staffs have been equally inadequate, particularly to provide necessary measures for the safety of users. This is a primary responsibility where large bodies of water are thrown open to public use.

The recreational areas differ in character and purpose from the parks and monuments, being generally of local or regional rather than national importance. Consequently the policies which guide their development and use must be different in a number of respects. Their development will be pointed more toward providing opportunities for intensive outdoor recreation. The principal activities will be those particularly suitable to them, such as swimming, boating, fishing, picnicking, camping, hiking, and winter sports. Facilities for games, sports, and other recreational activities not normally found in the national parks will be provided where suitable and where there is a demonstrated need. In general, priority of facility development will be based on service to the greatest number of persons. Vacation cabin sites will be leased if it can be assured that this use will not interfere with long-range developments needed for the general public; organized camping will be encouraged. Subject to sound conservation practices, hunting in accordance with State laws and regulations, grazing, and mining will be permitted.

The National Park Service does not aspire to be custodian of these areas. In addition to a few areas that may be considered to be of national significance, there are at present more than 50 smaller areas of less importance which possess valuable recreation-use possibilities. It is hoped that these possibilities will be realized, but the permanent management of these areas is properly a responsibility of State or local agencies. Their development will be conditioned on the agreement of such agencies to assume and carry out their permanent management, and their ability to do so. During the period of development, administration of these areas may in some cases have to be assumed temporarily by the Service.

Cooperation with the States.—The Service continued on a limited scale the advisory assistance to the States authorized by the Park, Parkway, and Recreational-Area Study Act of 1936. More than half the States requested, and were furnished, consulting service on one or more occasions. In addition the Service assisted the States by cooperating in the planning of reservoir areas upon which they may ultimately administer recreation, by informing them of the availability of surplus Federal properties of possible State park value, by participation in national, regional, and State conferences and by tabulating and distributing statistical data relating to State parks.

The Service supplied information and publications relating to parks and recreation to all inquirers as completely as available resources would permit. However, virtually all agencies and organizations below the State level requesting advice and assistance were referred to their State park agency or to some other appropriate organization. Inadequacies of funds and personnel aside, the Service believes that the States themselves should furnish such assistance to their political subdivisions.

Forest Service Cooperation in Land Use

A noteworthy and gratifying step in interbureau relationships was the agreement reached between the National Park Service and the Forest Service of the Department of Agriculture, providing for the integrated use of both park and forest lands in the Grandfather Mountain-Linville Gorge section of the Blue Ridge Parkway in North Carolina. This agreement was worked out in the field by representatives of the two services and is now in effect. It sets up a special administrative area of approximately 55,000 acres—some privately and some publicly owned—of which the National Park Service is to undertake to acquire some 7,500 acres near Grandfather and Grandmother Mountains and 5,500 acres on the Linville River, including the famous Linville Falls. The 6,700 acres of national forest land in the Linville Gorge is to be maintained as a “wild area,” in which the primitive environment is to be retained. Special cutting regulations to maintain the aesthetic qualities of the forest are to be applied by the Forest Service on the remainder of the special area.

A memorandum of agreement between the two services also confirms the informal arrangement under which the National Park Service administers Cedar Grove, a part of the Sequoia National Forest adjoining Kings Canyon National Park. Under a similar memorandum, the Service will also administer the Manzanita camp ground, in Lassen National Forest, adjacent to Lassen Volcanic National Park.

It is a pleasure to record these fine, and typical, examples of the close and satisfactory working relationships between the two services.

Disposal of Surplus Federal Realty

Public Law 616, approved June 10, 1948, amends the Surplus Property Act of 1944, to provide for the disposition of surplus real property to States, political subdivisions, and municipalities for use as parks, recreational areas, and historic monuments. Properties desired for park and recreational areas may be conveyed at 50 percent of their fair value; those sought for historic monuments, at no cost. Such transfers, however, are subject to determination by the Secretary of

the Interior that they are suitable and desirable for the use intended. The law specifies that historical monument determinations must be in conformity with recommendations of the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments.

Preliminary negotiations with the War Assets Administration revealed that more than 50 areas, of a total value exceeding \$100,000,000, might be requested. The Secretary has designated the National Park Service to make the determinations. Procedures for doing so on a reimbursable basis have been developed. Subsequent to February 28, 1949, when WAA will cease to exist, such surplus properties will be disposed of by the Reconstruction Finance Corporation. It is anticipated that the Service will work with that agency in a similar manner.

Airports To Serve National Park Travel

The past year has been marked by gratifying progress in National Park Service-Civil Aeronautics Administration relationships, primarily with respect to the establishment of airports, to be located outside of the parks and monuments but designed to serve those who wish to travel to those places by air. An immediate objective of the Interior-Commerce Departmental Airport Committee, on which the Service is represented, is to seek amendment of the Federal Airport Act of 1946 to permit Service participation with the Civil Aeronautics Administration in the sponsorship of needed facilities beyond park boundaries, and to select locations for these facilities. The program also envisions the printing of major park and monument locations on aeronautical flight maps, a determination of flight elevations to be permitted over park areas and the promulgation of the necessary regulations to give them effect, training of Service field personnel in flight regulation enforcement, and close cooperation with CAA on these and related matters. It is gratifying to note that there are no official differences of opinion between the two Departments on any of these matters at this time.

From the Service standpoint, the proposed amendment of the Airport Act is particularly desirable. At present the act limits Service participation in airport development to those which might be established inside park and monument boundaries. The Service has steadfastly opposed such developments, for reasons which have been set forth in detail in previous reports.

Soil and Moisture Conservation

In areas primarily of historical or archeological significance or those in which effort to halt and heal destructive processes started by man is justified, the Service has carried on a varied program of soil

and moisture conservation for the past several years. The work of the past year included such diverse projects as the 15,000-willow planting to retard erosion in the arroyo of Chaco Canyon National Monument; the leasing of 500 acres of the Chickamauga battlefield for carefully controlled agricultural use; the seeding, liming, and fertilizing of extensive areas of worn fields at Mammoth Cave National Park; the sowing of 45 acres at Kennesaw Mountain National Battlefield Park with sericea lespedeza; surveys undertaken to map out a complete program of erosion control on the shores of Lake Texoma, in Texas and Oklahoma, where this destructive process is being hastened by heavy use; and the adoption and enforcement of soil-stabilization practices on the Natchez Trace and Blue Ridge Parkways and at Vicksburg National Military Park.

Funds for soil and moisture conservation work are allocated to the Service by the Department, from moneys appropriated for that purpose, and on the basis of carefully planned projects. The Service's share of these funds in 1948 was \$80,000.

The Wildlife of the National Parks

National park areas are wildlife sanctuaries, in which all species are protected and exhibited in their natural environment, subject only to such degree of management as may be necessary to control overpopulations or to prevent the crowding out of vanishing species. The wildlife resources of the parks—of great interest both to the layman and the scientist—are not receiving the protection which should be given them, for the reason that park staffs are not adequate to provide it, or to carry out all necessary management measures. Furthermore, additional trained biologists are needed to carry on the field studies and to furnish technical guidance for sound management programs.

Though the wildlife program of the Service is thus handicapped, several steps have been taken during the past year which denote definite advances. In order to restore species once native there, whitetail deer and turkeys have been restocked, apparently with success, at Mammoth Cave National Park, with the aid of the State of Kentucky and the Fish and Wildlife Service of the Department of the Interior. At Big Bend National Park, the Texas Game, Fish and Oyster Commission cooperated with the Service last winter in stocking the park with 54 head of pronghorn antelope, a fine animal which formerly ranged there.

Some reductions necessary.—On the other hand, certain species are in oversupply in several of the areas and in some of these reductions have had to be made; in others it will probably be necessary sooner

or later to assert some controls over numbers which have increased—natural controls having been eliminated—beyond the capacity of the natural food supply. The elk of Glacier National Park, as well as both mule and whitetail deer, exceed the carrying capacity of the range. Here efforts are being made to effect reductions through hunting outside the park. Isle Royale's moose are increasing and apparently are due to reach a peak before long.

The black bear and gray squirrel populations of Great Smoky Mountains National Park have been reduced radically. There shortages of food within the park drove them outside to seek it, and considerable numbers were killed by hunters.

Wildlife reductions have been made at Yellowstone National Park to conserve the over-used winter range. Hunters killed 970 elk north of and outside the park and 34 were shipped out alive from the park, leaving about 8,000 animals in the northern herd. The Lamar area herd of bison was reduced to 300 by killing 181 and shipping out 54 alive. Fifty-eight antelope were removed by live-trapping by the Montana State Game Department, bringing the herd down to about 400. Because of limited range, four head of bison at Platt National Park were also disposed of.

In Sequoia National Park, 50 mule deer were destroyed as a restoration measure to meet a long-standing winter range problem.

The disease-control program was continued with the assistance of the Fish and Wildlife Service. All buffalo calves at Wind Cave National Park were vaccinated against brucellosis and all adults were tested for the disease. Positive reactors and definite suspects were eliminated, together with all free-ranging animals that could not be examined. Pathological examinations were begun to determine if the deer, antelope, and elk of the park are free from the disease. In Yellowstone, testing and vaccinating the bison of the Lamar herd was continued.

Burros, goats, pigs, et al.—The burro problem is serious at Lake Mead recreational area and Death Valley National Monument. If the number of burros at Lake Mead is not kept down, the effect on bighorns and some other native species will be disastrous. An estimated 500 feral burros are in Death Valley, where 162 were killed and 67 horses were removed in 1947.

Feral goats and pigs continue to make the protection of native wildlife difficult and far from effective in Hawaii National Park. The destruction of 2,064 goats and 108 pigs in the Kilauea-Mauna Loa section, on the island of Hawaii, was reflected in noticeable recovery of vegetation in pressure areas, though satisfactory control has by no means been attained.

In the Haleakala Section, island of Maui, the destructiveness of these animals is even more serious. Though 375 goats and 16 pigs were

killed as a result of drives in which friends of the park donated their services, this reduction was manifestly inadequate. Constant patrol is necessary to prevent damage to the Silversword, one of the most interesting and valuable plants of the park. Parts of the crater show ever-increasing signs of goat pressure. "All living trees are plimsolined to a height goats can reach by standing on their hind legs," the superintendent reports. "No reproduction of trees is possible; rare shrubs are suffering and younger trees are dying off as a result of barking by goats."

Dall sheep increase at Mount McKinley.—Of the long-standing wolf-Dall sheep problem at Mount McKinley National Park, the superintendent writes:

"The wolf-sheep relationship continues favorable. Wolves are in reduced numbers and sheep are trending upward. Of the authorized 15-wolf reduction, 9 have been taken."

While he notes that the ratio of lambs to ewes this year is below that of 1947, he adds that lambs are common, and attributes the reduced reproduction to the extremely heavy snowfall of April just before the lambing season. "All sheep appear in good condition since snow has disappeared from the feeding grounds," he adds, "and they are often seen from the Park Highway as they commonly were a few years ago."

The superintendent also records a mass migration of caribou in July 1947 near Camp Eielson, and in early June of this year thousands of the animals were scattered for several miles on both sides of the East Fork River.

Birds as well as beasts present problems of protection. In Hawaii, many birds, including the nene and the Hawaiian owl, are objects of concern. In the case of the owl, the steady increase in number of monogoses, an introduced species, may be a determining factor. The introduced mynah birds have multiplied and their parasites are dangerous to other birds.

Though there were fewer cygnets than in 1946 or 1944, the 62 trumpeter swans counted in Yellowstone National Park in August last year represented a slight increase over the figures for either of the two previous years. This splendid bird is just about holding its own. In the park, the species probably has filled the suitable habitats and so has attained its maximum population.

Mammal census.—The populations of the larger mammals inhabiting the National Park System are estimated as follows: Whitetail deer, 4,500; mule deer, 26,000; blacktail deer, 3,000; barren ground caribou, 15,000; elk, 25,000; moose, 1,700; antelope, 1,000; bighorn sheep, 2,600; mountain goat, 1,400; and bison, 1,200.

Promotion of Public and Employee Safety Intensified

With the parks used by millions of people, the responsibility of the Service for the safety of the public and employees has become a matter of great concern. The effective organization of safety committees in each of the four regional offices of the Service and in the larger field offices, for analysis of accident reports and promotion of safety; the completion of automatic sprinkler systems in two hotels in Glacier National Park and two in Yellowstone; structural improvements in several others and restrictions on the use of certain hotels for greater safety from the hazards of fire; cooperation with the United States Coast Guard in matters of safety on navigable waters under Service administration, and the adaptation of their requirements to apply to waters not classed as navigable; joint surveys with the Coast Guard to determine needed navigation aids at Lake Texoma recreational area—all of these indicate the variety of safety problems with which the National Park Service is concerned and the manner in which solutions, looking to a decrease in accidents to visitors and employees alike, are being sought.

It should be noted that although the safety needs at Lake Texoma were determined, no funds were available to meet them. The large artificial lakes of the four recreational areas administered by the Service and a number of natural lakes in the parks and monuments, of which Yellowstone Lake is the largest, involve dangers in connection with the use of water craft, particularly small boats, with which the Service cannot cope satisfactorily with present personnel and equipment, although it has benefited materially during the past 2 years from transfers of surplus boats of various sizes. With seven drownings at Lake Mead up to mid-May; with nine in Yellowstone National Park during the 1947 season, of which five were in Yellowstone Lake; with similar casualties at Lake Texoma recreational area and Rocky Mountain National Park, the Service is fully mindful of its obligation to protect the public, and is making every possible effort to meet it. There is ample indication of the need of modern navigational devices, better rescue equipment, more frequent patrol with better emergency facilities and, in some places, possibly more rigid restrictions as to size and equipment of craft permitted on waters under National Park Service control.

Acadia and Sequoia Forest Fires

Nearly one-third of the area of Acadia National Park was burned over and 14 park structures were destroyed in the fire which swept over more than 17,000 acres of Mount Desert Island last fall. The greatest loss was the forest cover. Since in many places the soil was burned away to bare rock, soil replacement by the slow processes

of nature will take many years. Recovery of the forest cover will take many years more.

To fight the fire, which started outside the park, Service personnel were brought in from a number of other parks and offices. In addition, invaluable assistance was given by the United States Air Force and numerous other national and local organizations.

To meet the costs of suppression, replace facilities destroyed, reduce fire hazards resulting from burned forest cover, and for cleanup and reforestation, Congress provided an emergency appropriation of \$400,000.

Two difficult-to-fight fires occurred in Sequoia National Park, one in August and one in September, the first covering 350 acres, the second 375. The August fire, on Moro Creek, was classed as incendiary. However, the case against a Government trail worker, cited by the local court to trial before the United States District Court, was dismissed by the United States attorney before coming to trial, because of his decision that the evidence was not sufficient to convict.

Airplane Crashes in National Parks

On October 24, 1947, a United Air Lines DC-6 plane carrying 52 persons caught fire in the air some 15 or 20 miles from Bryce Canyon National Park. The pilot attempted to make the Bryce Airport but, only seconds away from the field, crashed in the head of Tropic Canyon, within the park. All 52 aboard were killed instantly—a death toll exceeded in only one other instance in aviation history. The crash posed unusual and pressing problems for all personnel of the park, but their handling of the situation drew praise from the Civil Aeronautics Administration, the air lines, and all concerned.

Another crash occurred on the high slopes of Mount Rainier. Assistant Chief Ranger William J. Butler of Mount Rainier National Park, on July 21, 1947, in the course of a search to which he had been devoting every possible hour of his days off, discovered on the upper South Tahoma Glacier a long missing plane—a Marine transport plane which had disappeared on December 10, 1946, with 32 men aboard. The Navy was immediately notified of the find. Investigations, carried on under conditions of great hazard, resulted in the recovery of some records, but no trace of the personnel was found. On August 18, after the snow had melted considerably, three members of the park staff were able to reach the scene of the wreck and reported finding several bodies. An investigation was made by Navy, Marine, and Army ground forces, and representatives of mountaineering organizations to determine the advisability of attempting to remove the bodies. The final decision was to leave them in the glacier, since it was apparent that the attempt to remove them would be an unjusti-

fiably dangerous undertaking. Memorial services for the men lost in the crash were held at Round Pass, overlooking the South Tahoma Glacier, on August 24. Twelve of the bereaved parents were present.

Assistant Chief Ranger Butler, although eligible to accept the \$5,000 reward offered for finding the plane, declined it. Letters of commendation were sent him by Secretary Krug and the Director, and a "superior accomplishment" pay increase for him was approved shortly thereafter. He was also awarded a Distinguished Public Service Certificate by the Navy and a Distinguished Service Medal by the Department of the Interior.

When Nature Goes on a Rampage

Three times, in as many places, during the past year, disaster struck and caused serious damage in Service-administered areas. At Mount Rainier National Park, on October 2, 1947, a flood which originated high up in the Kautz Creek Valley resulted in the destruction of about a mile of the lower end of the Kautz Glacier, devastated at least 600 acres of forest, washed out approximately a half mile of the Nisqually entrance highway, and then covered its course with up to 17 feet of mud, boulders, and trees. Downstream it caused considerable damage to park structures and to private property outside the park. It also demolished power and telephone lines. Park headquarters was marooned for several days. Using equipment borrowed from several sources, an emergency outlet road was constructed to connect up with a private logging road. By the end of October the situation was partly stabilized; a temporary graveled road across the inundated area was open by November 10.

On the same day high waters on the upper Nisqually River damaged the Glacier bridge and destroyed two 5-ton dump trucks.

At Zion National Park, on the night of November 22, 1947, a huge segment of the cliff above the utility and warehouse area broke loose. One mass of nearly 900 tons of rock smashed four items of heavy equipment before coming to rest squarely on a truck tractor, crushing it 10 feet into the ground and rupturing a water line. A 60-ton rock crashed through a building and demolished a brand-new pickup truck. Total damage was estimated at \$20,000.

Chettro Kettle, one of the largest and most notable of the prehistoric pueblos in Chaco Canyon National Monument, N. Mex., was seriously damaged as a result of rains of cloudburst proportions on August 22 and 23, 1947. Choked by waterborne debris, the waters were diverted during the night and were dammed along the highest section of the 470-foot straight-back wall of the pueblo. About 40 feet of this wall, 17 to 23 feet in height, collapsed under the pressure of the waters. Twenty-two of the adjacent deep excavated rooms were filled with debris.

Award for Jefferson National Expansion Memorial Design

A 590-foot stainless steel arch is the central feature of the design for the development of the Jefferson National Expansion Memorial, on the St. Louis Waterfront, for which the Memorial Association awarded the first prize to Eero Saarinen of Michigan, in a decision announced on February 18, 1948. Mr. Saarinen has been commissioned by the association to prepare a scale model for the use of the United States Territorial Expansion Commission, an agency created by the Congress, upon whose recommendation Secretary Krug has approved the winning plans.

The Advisory Board

Mr. Bernard DeVoto, distinguished author, historian and conservationist, was appointed to membership on the Advisory Board on National Parks, Historic Sites Buildings, and Monuments following the death of Dr. Clark Wissler, who had rendered notable service to the board during his many years of membership.

The full Board held its first postwar meeting in Washington April 28 to 30, 1948, with 9 of its 11 members present.

United States Travel Division Reactivated

Inactive during the war, the United States Travel Division (formerly the U. S. Travel Bureau) was reestablished during 1948, with an appropriation of \$75,000. James L. Bossemeyer, who had been supervisor of the western office of the Travel Bureau in San Francisco before the war, was appointed Chief of the Division in August 1947.

It was decided at the outset that, due to budgetary limitations, only one office would be operated, to be a part of the Director's Office in Washington, D. C. To assist in the formulation of a completely new program and in its subsequent operation, an advisory committee was appointed by Secretary Krug in accordance with a provision of the basic act of 1940 which authorized travel promotion as a function of the National Park Service. The committee, as it convened for its first meeting on February 5 and 6, 1948, included Russell E. Singer, executive vice president, American Automobile Association, chairman; Charles A. Horrworth, executive vice president, American Hotel Association; W. Bruce Macnamee, executive assistant to the president, National Federation of American Shipping; M. F. Redfern, vice president for traffic, Air Transport Association of America; Hugh Siddall, chairman, Transcontinental Passenger Association, representing the Association of American Railroads; L. H. Ristow, chairman, National Bus Traffic Association, representing the National Association of Motor Bus Operators; Robert O. Swain, Department of State; John H. Sieker, Department of Agriculture; Paul H.

Jordan, Department of Commerce; E. H. Cox, Interstate Commerce Commission; Stephen C. Manning, Jr., United States Maritime Commission; and George W. Burgess, Civil Aeronautics Authority.

The untimely death of Mr. Siddall on June 27, 1948, led to the interim appointment of M. F. Dolan, of the Association of American Railroads, pending the designation of successor to Mr. Siddall.

Because of the importance of close cooperation with the National Association of Travel Officials, the Secretary also appointed four collaborators from that organization; Everett F. Greateon, Maine Development Commission; J. Herbert Walker, Pennsylvania Vacation and Recreation Bureau; Roy C. Beckman, Florida State Advertising Commission; and Don Thomas, All-Year Club of Southern California.

The Travel Division is prohibited by law from engaging in activities competitive with private travel agencies and consequently could not provide travel services to individuals, even if funds and staff permitted. Its great opportunities for usefulness are in the provision of services to the travel industry designed to produce ultimate benefits both for the industry and the traveler, and in the promotion of travel into the United States from other countries. The program agreed upon for it is pointed chiefly in those two directions.

The legislation under which the Division functions specifically allocates its activities to the National Park Service. Although it has always served the whole travel field and has been meticulous in avoiding favoritism toward the National Park System, it has been suspect among many individuals and agencies because of its connection with the Service. Convinced that it could function more effectively as a separate agency in the Department, the National Park Service took the initiative in urging action in that direction. The Department has urged enactment of legislation introduced last spring which would convert the present Travel Division into a bureau of the Department of the Interior.

Director's Office Back in Washington

The "exile" of the Director's Office from the Seat of Government to Chicago, which began as a war measure in September 1942, was ended during the latter part of October 1947, when the office was reestablished in the Interior Building in Washington. Separation from the Office of the Secretary, from other bureaus of the Department, and from the many other Government offices with which it is desirable to maintain close relationships; the delays in the accomplishment of Service business which resulted from it; and the frequent travel between Chicago and Washington were a severe and expensive handicap, now happily ended.

During the more than 5 years that the office was in Chicago, the small liaison office maintained in Washington was ably headed by Associate Director Arthur E. Demaray. Mr. Demaray's exceptional knowledge of Service policy and his mature, level-headed judgment peculiarly fitted him for that difficult and exacting assignment and did much to minimize the difficulties of the long-enforced separation.

Despite the fact that this report has dealt extensively with handicaps that confront the Service, particularly the inadequacy of funds for the performance of functions prescribed by law and expected by the public, the National Park Service looks with satisfaction upon the many advances made in the past year. Not only the unprecedented number of visitors, but also the widespread favorable comment by the press of the country on the way in which the Service is doing its work, encourages the thought that the National Park System is taking its proper place in the cultural life of the Nation.

Areas administered by the National Park Service, acreage and number of visitors, June 30, 1948

Areas (classification)	State	Federal land (acres)	Approximate visitors, fiscal year July 1, 1946-June 30, 1947	Approximate visitors, fiscal year July 1, 1947-June 30, 1948
NATIONAL PARKS				
Acadia.....	Maine.....	28,308.35	381,683	438,644
Big Bend.....	Texas.....	691,338.95	16,033	35,098
Bryce Canyon.....	Utah.....	36,010.38	132,461	166,136
Carlsbad Caverns.....	New Mexico.....	45,526.59	383,261	422,226
Crater Lake.....	Oregon.....	160,290.33	277,527	359,314
Everglades.....	Florida.....	271,007.80	(1)	(1)
Glacier.....	Montana.....	997,247.85	210,735	331,813
Grand Canyon.....	Arizona.....	645,295.91	533,306	620,875
Grand Teton.....	Wyoming.....	94,892.92	135,676	145,040
Great Smoky Mountains.....	Tennessee-North Carolina.....	461,003.79	1,136,604	1,277,846
Hawaii.....	Territory of Hawaii.....	173,404.60	352,864	409,331
Hot Springs.....	Arkansas.....	1,019.13	293,706	305,299
Isle Royale.....	Michigan.....	133,838.51	6,802	7,961
Kings Canyon.....	California.....	452,904.82	239,129	239,262
Lassen Volcanic.....	do.....	103,269.28	129,596	147,458
Mammoth Cave.....	Kentucky.....	50,584.58	172,099	190,059
Mesa Verde.....	Colorado.....	51,017.87	42,837	54,855
Mount McKinley.....	Alaska.....	1,939,319.04	1,557	4,477
Mount Rainier.....	Washington.....	241,524.77	971,052	860,335
Olympic.....	do.....	846,718.71	142,429	188,183
Platt.....	Oklahoma.....	911.97	468,203	740,580
Rocky Mountain.....	Colorado.....	252,788.28	812,278	954,779
Sequoia.....	California.....	385,100.13	349,581	354,481
Shenandoah.....	Virginia.....	193,472.98	765,701	887,646
Wind Cave.....	South Dakota.....	26,582.75	83,370	103,467
Yellowstone.....	Idaho-Montana-Wyoming.....	2,213,206.55	827,032	941,578
Yosemite.....	California.....	756,440.62	713,413	735,120
Zion.....	Utah.....	94,241.06	233,155	285,728
Total.....		11,347,268.52	9,812,090	11,207,591
NATIONAL HISTORICAL PARKS				
Abraham Lincoln.....	Kentucky.....	116.50	52,564	68,742
Chalmette.....	Louisiana.....	33.25	73,740	51,933
Colonial.....	Virginia.....	7,233.46	578,709	691,744
Morristown.....	New Jersey.....	958.37	284,716	313,365
Saratoga.....	New York.....	1,865.45	47,738	54,350
Total.....		10,207.03	1,037,467	1,180,134

See footnotes at end of table.

Areas administered by the National Park Service, acreage and number of visitors, June 30, 1948—Continued

Areas (classification)	State	Federal land (acres)	Approximate visitors, fiscal year July 1, 1946- June 30, 1947	Approximate visitors, fiscal year July 1, 1947- June 30, 1948
NATIONAL MILITARY PARKS				
Chickamauga and Chattanooga.....	Georgia-Tennessee.....	8, 149. 36	240, 057	271, 526
Fort Donelson.....	Tennessee.....	102. 54	32, 505	32, 724
Fredericksburg and Spotsylvania.....	Virginia.....	2, 420. 71	99, 268	107, 043
Gettysburg.....	Pennsylvania.....	2, 463. 46	523, 908	657, 050
Guilford Court House.....	North Carolina.....	148. 83	36, 998	36, 190
Kings Mountain.....	South Carolina.....	4, 012. 00	30, 859	32, 813
Moore's Creek.....	North Carolina.....	30. 00	3, 767	4, 202
Petersburg.....	Virginia.....	1, 324. 62	110, 621	138, 383
Shiloh.....	Tennessee.....	3, 729. 26	268, 971	275, 276
Stones River.....	do.....	323. 86	22, 520	5, 475
Vicksburg.....	Mississippi.....	1, 323. 56	25, 924	33, 299
Total.....		24, 028. 20	1, 395, 398	1, 593, 981
NATIONAL BATTLEFIELD PARKS				
Kennesaw Mountain.....	Georgia.....	3, 094. 21	33, 295	41, 362
Richmond.....	Virginia.....	684. 44	23, 725	26, 100
Total.....		3, 778. 65	57, 020	67, 462
NATIONAL MEMORIAL PARKS				
Theodore Roosevelt.....	North Dakota.....	58, 341. 26	(1)	2 4, 563
NATIONAL MONUMENTS				
Ackia Battleground.....	Mississippi.....	49. 15	(1)	(1)
Andrew Johnson.....	Tennessee.....	17. 08	23, 482	24, 496
Appomattox Court House.....	Virginia.....	968. 25	22, 050	25, 600
Arches.....	Utah.....	33, 769. 94	3, 080	6, 807
Aztec Ruins.....	New Mexico.....	27. 14	11, 929	13, 886
Badlands.....	South Dakota.....	122, 972. 46	244, 691	345, 712
Bandelier.....	New Mexico.....	27, 048. 89	22, 055	26, 710
Big Hole Battlefield.....	Montana.....	200. 00	2, 303	2, 585
Black Canyon of the Gunnison.....	Colorado.....	13, 176. 02	18, 184	23, 710
Cabrillo.....	California.....	. 50	3 71, 365	382, 447
Canyon de Chelly.....	Arizona.....	83, 840. 00	2, 041	2, 021
Capitol Reef.....	Utah.....	33, 068. 74	(1)	(1)
Capulin Mountain.....	New Mexico.....	680. 42	24, 960	30, 600
Casa Grande.....	Arizona.....	472. 50	34, 041	36, 837
Castillo de San Marcos.....	Florida.....	18. 51	260, 985	266, 169
Castle Pinckney.....	South Carolina.....	3. 50	(1)	(1)
Cedar Breaks.....	Utah.....	6, 172. 20	22, 663	29, 228
Chaco Canyon.....	New Mexico.....	18, 039. 39	1, 337	1, 107
Channel Islands.....	California.....	1, 119. 98	(1)	(1)
Chiricahua.....	Arizona.....	10, 529. 80	15, 161	13, 916
Colorado.....	Colorado.....	18, 120. 55	44, 672	58, 596
Craters of the Moon.....	Idaho.....	47, 210. 67	21, 491	28, 007
Custer Battlefield.....	Montana.....	765. 34	50, 706	60, 237
Death Valley.....	California-Nevada.....	1, 850, 565. 20	157, 303	161, 359
Devil Postpile.....	California.....	798. 46	(1)	(1)
Devils Tower.....	Wyoming.....	1, 193. 91	36, 301	41, 214
Dinosaur.....	Colorado-Utah.....	190, 798. 49	7, 509	10, 222
El Morro.....	New Mexico.....	240. 00	1, 899	1, 672
Father Millet Cross.....	New York.....	. 01	(1)	(1)
Fort Frederica.....	Georgia.....	74. 53	34, 946	47, 722
Fort Jefferson.....	Florida.....	4 86. 82	8, 778	7, 053
Fort Laramie.....	Wyoming.....	214. 41	11, 635	12, 159
Fort Matanzas.....	Florida.....	227. 76	13, 260	13, 211
Fort McHenry.....	Maryland.....	47. 64	504, 242	458, 416
Fort Pulaski.....	Georgia.....	5, 427. 39	(5)	35, 074
Fort Sumter.....	South Carolina.....	2. 40	(6)	(1)
Fossil Cyead.....	South Dakota.....	320. 00	(1)	(1)
George Washington Birthplace.....	Virginia.....	393. 68	37, 176	40, 000
Gila Cliff Dwellings.....	New Mexico.....	160. 00	(1)	(1)
Glacier Bay.....	Alaska.....	2, 297, 456. 27	(1)	(1)
Grand Canyon.....	Arizona.....	196, 051. 00	172	137
Gran Quivira.....	New Mexico.....	450. 94	2, 286	2, 266
Great Sand Dunes.....	Colorado.....	35, 908. 19	10, 790	15, 989
Holy Cross.....	do.....	1, 392. 00	(1)	(1)
Homestead.....	Nebraska.....	162. 73	1, 072	2, 731
Hovenweep.....	Utah-Colorado.....	299. 34	122	156
Jackson Hole.....	Wyoming.....	173, 064. 62	(1)	(1)
Jewel Cave.....	South Dakota.....	1, 274. 56	10, 039	15, 276
Joshua Tree.....	California.....	655, 961. 33	47, 959	60, 671
Katmai.....	Alaska.....	2, 697, 590. 00	(1)	(1)
Lava Beds.....	California.....	46, 027. 56	30, 737	33, 768
Lehman Caves.....	Nevada.....	640. 00	3, 808	5, 297
Meriwether Lewis.....	Tennessee.....	300. 00	12, 348	13, 229

See footnotes at end of table.

*Areas administered by the National Park Service, acreage and number of
visitors, June 30, 1948—Continued*

Areas (classification)	State	Federal land (acres)	Approximate visitors, fiscal year July 1, 1946- June 30, 1947	Approximate visitors, fiscal year July 1, 1947- June 30, 1948
NATIONAL MONUMENTS—continued				
Montezuma Castle.....	Arizona.....	783.09	18,528	25,495
Mound City Group.....	Ohio.....	57.00	20,849	34,299
Muir Woods.....	California.....	424.56	277,557	282,469
Natural Bridges.....	Utah.....	2,649.70	959	1,190
Navajo.....	Arizona.....	360.00	368	405
Ocmulgee.....	Georgia.....	683.48	28,716	27,469
Old Kasaan.....	Alaska.....	38.00	(1)	(1)
Oregon Caves.....	Oregon.....	480.00	77,885	80,938
Organ Pipe Cactus.....	Arizona.....	328,161.73	77,490	94,449
Perry's Victory.....	Ohio.....	14.25	27,500	41,253
Petrified Forest.....	Arizona.....	85,303.63	306,576	340,098
Pinnacles.....	California.....	12,817.77	17,702	19,638
Pipe Spring.....	Arizona.....	40.00	949	743
Pipestone.....	Minnesota.....	115.60	3,193	5,143
Rainbow Bridge.....	Utah.....	160.00	(1)	(1)
Saguaro.....	Arizona.....	53,669.24	16,098	19,867
Scotts Bluff.....	Nebraska.....	2,196.44	53,642	45,884
Shoshone Cavern.....	Wyoming.....	212.37	(3)	(3)
Sitka.....	Alaska.....	57.00	1,799	6,735
Statue of Liberty.....	New York.....	10.38	543,548	537,171
Sunset Crater.....	Arizona.....	3,040.00	11,946	20,699
Timpanogos Cave.....	Utah.....	250.00	53,109	54,492
Tonto.....	Arizona.....	1,120.00	16,338	15,761
Tumacacori.....	do.....	10.00	22,718	26,425
Tuzigoot.....	do.....	42.67	12,057	16,900
Verendrye.....	North Dakota.....	253.04	(1)	(1)
Walnut Canyon.....	Arizona.....	1,641.62	19,179	20,613
Wheeler.....	Colorado.....	300.00	(1)	(1)
White Sands.....	New Mexico.....	140,247.04	89,493	106,134
Whitman.....	Washington.....	45.84	(1)	(1)
Wupatki.....	Arizona.....	34,853.03	3,489	4,999
Yucca House.....	Colorado.....	9.60	11	93
Zion.....	Utah.....	33,920.75	(1)	(1)
Total.....		9,279,368.10	3,531,277	4,185,655
NATIONAL BATTLEFIELD SITES				
Antietam.....	Maryland.....	183.32	31,970	32,205
Brices Cross Roads.....	Mississippi.....	1.00	(1)	(1)
Cowpens.....	South Carolina.....	1.00	1,217	1,419
Fort Necessity.....	Pennsylvania.....	2.00	76,986	80,096
Tupelo.....	Mississippi.....	1.00	(1)	(1)
White Plains.....	New York.....		(1)	(1)
Total.....		188.32	110,173	113,720
NATIONAL HISTORIC SITES				
Adams Mansion.....	Massachusetts.....	4.05	(1)	1,614
Atlanta Campaign Markers.....	Georgia.....	20.96	(1)	(1)
Federal Hall Memorial.....	New York.....	.49	69,662	76,656
Fort Raleigh.....	North Carolina.....	16.45	110,785	103,846
Hampton.....	Maryland.....	43.30	(3)	(1)
Home of Franklin D. Roosevelt.....	New York.....	33.23	486,236	473,724
Hopewell Village.....	Pennsylvania.....	848.06	85,801	73,249
Jefferson National Expansion Memo- rial.....	Missouri.....	82.58	27,801	28,055
Manassas Battlefield Park.....	Virginia.....	1,604.57	8,297	9,332
Old Philadelphia Custom House.....	Pennsylvania.....	.79	30,985	26,100
Salem Maritime.....	Massachusetts.....	8.61	10,522	15,916
Vanderbilt Mansion.....	New York.....	211.65	54,004	61,256
Total.....		2,874.74	884,093	869,748
NATIONAL MEMORIALS				
House Where Lincoln Died.....	District of Columbia.....	.05	63,043	55,153
Kill Devil Hill.....	North Carolina.....	314.40	54,649	80,784
Lee Mansion.....	Virginia.....	2.71	317,991	311,573
Lincoln Memorial.....	District of Columbia.....	.61	1,274,967	1,511,390
Lincoln Museum.....	do.....	.18	103,609	102,100
Mount Rushmore.....	South Dakota.....	1,686.40	341,298	445,174
New Echota Marker.....	Georgia.....	.92	(1)	(1)
Thomas Jefferson.....	District of Columbia.....	1.20	589,589	560,896
Washington Monument.....	do.....	.37	834,693	799,548
Total.....		2,006.84	3,579,839	3,866,618

See footnotes at end of table.

Areas administered by the National Park Service, acreage and number of visitors, June 30, 1948—Continued

Areas (classification)	State	Federal land (acres)	Approximate visitors, fiscal year July 1, 1946-June 30, 1947	Approximate visitors, fiscal year July 1, 1947-June 30, 1948
NATIONAL CEMETERIES				
Antietam.....	Maryland.....	11.36	(⁵)	(⁵)
Battleground.....	District of Columbia.....	1.03	2,700	2,700
Fort Donelson.....	Tennessee.....	15.34	(⁵)	(⁵)
Fredericksburg.....	Virginia.....	12.00	(⁵)	(⁵)
Gettysburg.....	Pennsylvania.....	15.55	(⁵)	(⁵)
Poplar Grove.....	Virginia.....	8.72	(⁵)	(⁵)
Shiloh.....	Tennessee.....	10.25	(⁵)	(⁵)
Stones River.....	do.....	20.09	(⁵)	(⁵)
Vicksburg.....	Mississippi.....	119.76	(⁵)	(⁵)
Yorktown.....	Virginia.....	2.91	(⁵)	(⁵)
Total.....		217.01	2,700	2,700
NATIONAL PARKWAYS				
Blue Ridge.....	North Carolina-Virginia.....	42,850.08	1,290,716	1,371,481
George Washington Memorial.....	Virginia-Maryland.....	2,897.79	(¹)	(¹)
Natchez Trace.....	Tennessee-Alabama-Mississippi.....	13,648.87	(¹)	(¹)
Total.....		59,396.74	1,290,716	1,371,481
NATIONAL CAPITAL PARKS				
National Capital Parks.....		29,023.42	(¹)	(¹)
Grand total, National Park System.....		20,816,698.83	22,926,675	24,463,653
NATIONAL RECREATIONAL AREAS				
Coullee Dam.....	Washington.....	98,500.00	(¹)	106,270
Lake Mead.....	Arizona-Nevada.....	1,772,533.33	1,225,992	1,576,689
Lake Texoma.....	Texas-Oklahoma.....	161,137.00	(¹)	1,382,123
Millerton Lake.....	California.....	11,605.00	(¹)	352,280
Shasta Lake.....	do.....	125,230.00	(¹)	(¹)
Total.....		2,169,005.33	1,225,992	3,417,362
RECREATIONAL DEMONSTRATION AREAS				
Catoctin.....	Maryland.....	9,918.28	(¹)	(¹)
Custer.....	South Dakota.....	5,627.42	(¹)	(¹)
Total.....		15,545.70		
NATIONAL HISTORIC SITES NOT FEDERALLY OWNED				
Gloria Dei.....	Pennsylvania.....	1.20		
Independence Hall.....	do.....			
Jamestown.....	Virginia.....			
McLoughlin House.....	Oregon.....			
Saint Paul's Church.....	New York.....			
San Jose Mission.....	Texas.....			
Touro Synagogue.....	Rhode Island.....			
Total.....		1.20		
PROJECTS ⁹				
Cape Hatteras National Seashore Recreational Area.....	North Carolina.....	82.10	(¹)	(¹)
Olympic Coastal Strip and Queets Corridor.....	Washington.....	44,813.84	(¹)	(¹)
Total.....		44,895.94		
Grand total, National Park System and other areas and projects under the jurisdiction of National Park Service.....		23,046,147.00	22,926,675	27,881,015

¹ No travel figures available or maintained.² Travel shown from May through June 1948 only.³ Travel shown from April through June 1947 only.⁴ Land only. Area encompassed on map included with and made a part of Presidential Proclamation establishing monument is approximately 47,125 acres of land and water.⁵ Closed to public.⁶ Not established.⁷ Travel shown from Aug. 1, 1946, through June 1947.⁸ Included in travel figures of adjacent battlefield sites, military or historical parks, or memorials.⁹ Includes only those in which lands are under National Park Service administration.

9.1
49

ANNUAL REPORT
of the DIRECTOR
NATIONAL PARK SERVICE
to the
SECRETARY OF THE INTERIOR

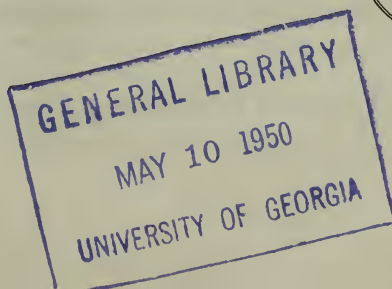
Reprinted from the

ANNUAL REPORT OF THE SECRETARY
OF THE INTERIOR

For the Fiscal Year Ended June 30, 1949

Fiscal Year Ended June 30

1949



The National Park Service

Newton B. Drury, *Director*



“NATURAL beauty is the ultimate spiritual appeal of the universe or of the God of Nature, to their nursling man * * *. But science and machinery have now armed him with weapons that will be his own making or undoing, as he chooses to use them; at present he is destroying natural beauty apace in the ordinary course of business and economy. Therefore, unless he now will be at pains to make rules for the preservation of natural beauty, unless he consciously protects it at the partial expense of some of his greedy activities, he will cut off his own spiritual supplies, and leave his descendants a helpless prey forever to the base materialism of mean and vulgar sights.”

These lines, written by G. M. Trevelyan, are found in a document entitled “Britain’s Heritage: A Record of the National Trust,” published in London in 1947. Though written specifically of Great Britain, their basic truth is of universal application. Their warning surely deserves the consideration of thoughtful Americans, particularly now, when physical changes in the outward look of our country are being made or are planned on a scale—and at a cost—hardly dreamed of a decade ago. Certainly they warn us of our responsibility as civilized human beings, capable of appraising and weighing opposed values, to examine all proposals to effect extensive modification of the American landscape, to harness our waters, to cut down our forests, to rob our wildlife of suitable habitat and to invade our wildernesses; to examine the issues involved, so that we may make certain beyond the possibility of mistake, before it is too late, that the real gains (as distinguished from limited and temporary economic advantage) are more than sufficient to balance the losses.

Those words from across the Atlantic are such as to inspire us to cherish and protect the national parks. They are of a sort to strengthen the growing conviction in America that there are certain

values in our native landscape that ought to be sustained against destruction or impairment; that, though their worth cannot be expressed in money terms, they are essential to our "life, liberty, and the pursuit of happiness": that this Nation of ours is not so rich it can afford to lose them; that it is still rich enough to afford to preserve them.

Glacier National Park saved from disfigurement.—During a year marked by many advances in the several fields of National Park Service activity, perhaps the most notable was the decision of the Department of the Army to eliminate the Glacier View Dam project from its program of development in the Columbia River Basin. This project, which would have involved the destruction of nearly 20,000 acres of exceptionally important wilderness along the North Fork of the Flathead River, in Glacier National Park, had been opposed unanimously by conservation groups throughout the Nation.

Diversion of Colorado River from Grand Canyon averted.—No less gratifying was the Department's decision to eliminate the Kaibab Tunnel project from the comprehensive scheme being developed for the Colorado River. This project was unique in that, though no part of it would have been constructed in Grand Canyon National Park, it would have profoundly affected the most important single element in the Grand Canyon picture—the river which has been the principal agent in carving the canyon through the slowly uplifting rock. The project contemplated the construction of a dam in Marble Canyon, upstream from the park, and diversion of the flow of the river through a long tunnel under the Kaibab Plateau to a powerhouse on Kanab Creek. This would have meant that the only appreciable flow through the Grand Canyon would have been from the Little Colorado River which usually, during the summer months, has no above-ground flow at all.

Ultimate upstream developments on the Colorado are certain to modify the flow of the river through the Canyon in some degree. The comprehensive development of the river for power and irrigation is looked upon as too important to the country as a whole to justify any effort to block it. However, with the tunnel project eliminated, the whole volume of the river will flow through the Grand Canyon, as it has done for millions of years.

Rocky Mountain spared transmission line.—The disfigurement of a tower transmission line across Rocky Mountain National Park was prevented when the Commissioner of Reclamation decided to transmit power for the operation of the Granby pumping plant on the Colorado-Big Thompson project by cable which will be strung through the Alva B. Adams irrigation tunnel, under the Continental Divide.

Mammoth Cave threatened by dam.—A continuing threat is that of

the Mining City Dam project of the Corps of Engineers, a part of the Corps' comprehensive plan for flood control and power development of the Ohio River and its tributaries.

House bill 5472, which would authorize the expenditure of \$75,-000,000 on previously approved projects in this program, was under consideration before the House Public Works Committee at the end of the fiscal year. The Mining City project was authorized in 1938, but, because of the fact that it would cause additional flooding of the Echo River Channel in Mammoth Cave National Park and would aggravate the problem of silt deposition there, the Service feels obliged to oppose its construction.

Impartial appraisal of projects needed.—Of significance in connection with threats such as these is the recommendation of the Hoover Committee that Federal water-impoundment projects be subject to an impartial board of review, so that each project may be fully justified economically and socially and that there may be effective coordination from the inception of such projects. The National Park Service, administering areas which it is obliged to retain unimpaired for the enjoyment of future generations, is constantly faced by threats to the integrity of many areas, such as those mentioned above. It is justified, therefore, in seeking assurance that, if any construction project is to invade an area in the National Park System, it shall be undertaken only "on the basis of need so pressing that the economic stability of the country, or its existence, would be endangered unless such use were permitted," to quote Secretary Krug's forthright statement on protection of the parks and monuments. Such an issue needs to be decided by an impartial tribunal.

Landmarks of progress.—Establishment of the San Juan National Historic Site to embrace the ancient fortifications of the Puerto Rican capital was a noteworthy event of the past year. Other events deserving special mention include the announcement of the Department's revised concessions policy; the completion of modern museums at Manassas National Battlefield Park and Guilford Courthouse National Military Park; completion of the Jackson wing of the Scotts Bluff National Monument Museum, and continuing progress in museum planning and development, with numerous donations of funds and exhibits; the gift of land for the DeSoto National Memorial in Florida; two large land purchases in Everglades National Park, and acquisition of important properties in several areas of the National Park System; progress in the rehabilitation of concession facilities and some—though still far from adequate—additions; the renewal, for 20 years, of the concessions contract with the Utah Parks Co.; a successful National Park Service conference at Grand Canyon National Park; effective participation in winter storm relief activities

by Service personnel and equipment; and continued devoted performance of duty by Service personnel in field and central offices.

The National Park Service is still severely handicapped by serious inadequacies of personnel throughout the organization and of funds for greatly needed developments of all sorts. Three disastrous forest fires highlighted the need of modernized communications throughout the system. Though the Interior Appropriation Act had not been passed at the end of the year, there were many reasons to feel that there would be better provision for the Service during the 1950 fiscal year.

The Department's Centennial.—Although the National Park Service is one of the younger bureaus of the Department of the Interior, two of the areas which it administers—Yellowstone and Hot Springs National Parks—represent probably the earliest examples of the allocation of land to conservation-and-use under the Department's control. Attainment of the Department's one hundredth birthday on March 3 gave the Service an opportunity to participate with all other bureaus and offices of the Department in a series of ceremonies which must surely have made many Americans more keenly aware of the existence of the Department and the importance and scope of its work, particularly in the conservation field. All of the many field offices of the Service have been encouraged and urged to seize every occasion to call attention to the anniversary and to develop better public understanding of the conservation principles of which Interior is the exemplar.

Jackson Hole and Olympic.—Though the controversy over Jackson Hole National Monument cannot be said to be closed, time appears to be working definitely in the monument's favor. The points of difference seem now virtually to have been narrowed down to the problem of control of the Jackson Hole elk herd.

A mid-April meeting of National Park Service and Wyoming representatives resulted in no unanimous conclusions and no commitments, but did serve to foster in each of the participants a better understanding of the viewpoints and positions of the others. The Service maintains that the necessary herd reduction can be effected by hunting outside the monument, primarily through greater flexibility in determining hunting seasons, because the greater portion of the herd is not protected by the monument for any significant length of time. The Wyoming Fish and Game Commission believes otherwise. All at the conference, however, appeared agreed that further cooperative study of the elk problem was needed.

The threat of a boundary retraction at Olympic National Park remains. However, the only measures relating to boundary adjustments introduced in Congress during the 1949 regular session were Senate and House concurrent resolutions, similar to those of last

year, to establish a joint congressional committee to study and report on the matter.

Twelve years of regionalization.—August 1949 will mark the completion of 12 years of experience with regionalization of the activities of the Service. The four regional offices—in Richmond, Va.; Omaha, Nebr.; Santa Fe, N. Mex.; and San Francisco, Calif.—reflect, and are extensions of, the Washington office. Through them it is possible to bring the point of decision on many administrative matters closer to the field areas which they serve, and to provide needed professional services for which it would be impractical and expensive to staff the individual areas, and which could be furnished from the Washington office only at a tremendous cost in travel. In a few highly specialized professional fields, it is still necessary to provide direct service from Washington.

The necessity of regionalization resulted from the growth of the National Park System from a predominantly western institution to one which is actually Nation-wide in extent. Twelve years of it, under regional directors of competence and possessed of varied experience within the Service, has amply demonstrated its value both to the field areas, small and large, in the rendering of service, and to the Washington office, in relieving it of concern with a large amount of detail.

CONCESSIONS IN THE PARKS

The earliest concession operations in any national park were those in Yellowstone, established in the 1880's, and designed to meet the needs of a handful of travelers who reached the place with difficulty and who demanded none of the luxuries that the modern traveler counts as necessities. Since that time, with vast increases in quantity of travel and rapidity of movement, provision for the public has of necessity undergone an evolution designed to keep abreast of public demand and need. This evolution has been subject to definite limitations.

Chief among these has been that the Congress has never been disposed to appropriate funds to provide the basic "plant" of hotels, lodges, stores, and eating places. Thus, though a small fraction of the facilities of this sort now in the parks are, for one reason or another, Government-owned, it has been necessary to rely on private capital to make the necessary investment in plant; and this capital has been enlisted, during decades of changing conditions, with the primary object of meeting a public need on the best terms possible from the public standpoint.

Because the evolutionary process has not been based upon or resulted in a uniform policy; because of some inequities, from the

standpoint of both the public and the concessioners; and because facilities had lagged behind need in the face of a phenomenal increase in visitors, the Director of the National Park Service, soon after the war ended, suggested that the situation be appraised, and recommendations formulated, by a qualified group of persons not connected with the Government. The basic questions upon which their advice was to be sought seemed to be these:

Should the Government now undertake to provide the basic plant, to be operated, as now and in the past, by individuals or corporations under contract?

If, though that were considered desirable, the Congress were not disposed to provide funds for such an investment, under what conditions can private capital be induced not only to continue operations but also to provide much-needed expansion? The question recognized that these conditions must be fair to the public, to the government which represents the public, and to the concessioners. In posing these basic questions, there was complete awareness that, in many of the parks, the pioneering days and the pioneering risks were largely past; that the parks had come of age and that providing for the public in them was "big business."

The Concessions Advisory Group, whose recommendations were briefly summarized in last year's report, attempted to provide the answers to these questions, on the basis of exhaustive study and analysis of every phase of the concessions problem. Secretary Krug's determination of policies, announced early in November, is directed primarily at the attainment of uniformity, the elimination of inequities, the encouragement of investment in additional facilities to the extent consistent with the public interest, and clear-cut definition of contractual obligations on the part of both Government and concessioner. Major points of clarification or of differences from previous policy relate to (1) control of the concessioner's rate of return on investment through the regulation of rates charged the public, (2) the method of levying franchise fees, (3) the procedure for negotiating and awarding new contracts covering concessions for which contracts have expired, (4) definition of the concessioner's equity in basic concession facilities, (5) a new definition of investment, (6) the inclusion in the contract of an option for Government purchase, and (7) the suggestion for the establishment of a Government-owned corporation to replace existing non-profit-sharing operating corporations.

Expansion and rehabilitation of public accommodations.—The rehabilitation of concessioners' plants to enable them to provide better service to the public has necessarily taken precedence over sorely needed expansion of accommodations. However, in a few places additional accommodations have been provided or are in prospect.

The Lake Hotel, closed for a number of years, is being completely rehabilitated and modernized. It will add 100 rooms, many of them with bath, to Yellowstone's present inadequate supply, together with dining room and kitchen facilities. Some 50 new cabins there, begun before the war, are now awaiting only the completion of new water and sewer connections. An automatic sprinkler system is being installed in the hotel. When it is completed, the Yellowstone Park Co. will have supplied this type of protection to all guest quarters more than two stories in height.

At Shenandoah National Park, the Virginia Sky-Line Co. completed an additional 10-room guest building at Big Meadows, and began building a new dining room and kitchen at Skyland, to replace one destroyed by fire. On the Blue Ridge Parkway a new gasoline station and coffee shop were put into operation at Bluff and a 24-unit lodging structure was nearing completion.

Two new cabins were begun at Bear Lake Lodge in Rocky Mountain National Park. At Yosemite National Park, additional tent and platform accommodations have been provided at Yosemite Lodge, a new store building and bathhouse have been completed at Camp 16, and a new 20-room employee dormitory is being constructed in the New Village area. At Zion and Bryce Canyon National Parks, bath-rooms have been added to 40 standard cabins. The Utah Parks Co. has also done much other modernization and has provided new transportation equipment.

Practically all this rehabilitation and expansion has been accomplished by plowing back depreciation funds and profits into the business. This does not provide all the expansion that is needed, though more could be provided in this way but for the lack of appropriated Government funds to extend utility services to the expansion units planned by the concessioners.

Capital for expansion unobtainable.—Except for the limited amount which can be used from profits or depreciation reserve, funds for expanded facilities can be provided only in two ways: (1) By obtaining new private capital or (2) by the appropriation of Federal funds for the purpose. Concessioners have found it virtually impossible to obtain new capital at this time for expansion. Owners of risk capital display little interest in the investment prospects offered by national park concessions, where the seasons are short, the business subject to the vagaries of tourist travel, and the buildings must be built on Federal land under a contract term limited by law to 20 years, without what investors consider a satisfactory means of liquidating the investment at the end of the contract period. Furthermore, and even more discouraging to investors, building costs continue

so high that prevailing rates for rooms and services will not permit enough profit for the investors to consider it worth the risk.

A new contract has been offered concessioners which offers inducements and safeguards to investment to the extent which it is felt that the Government can go, with the hope that new capital would be interested in investing in new facilities. Even that as yet has not attracted capital, however.

This situation has been explained to the House Committee on Public Lands, with the suggestion that, if the public is to receive the services enjoyed in the past, apparently the only way in which new facilities can be financed at many areas, is by providing Government funds for the purpose, with private individuals or corporations as operators under concession contracts. It has been further suggested to the committee that provision be made for the gradual purchase of the present concessioners' operating plants by the Government. Regardless of the method of expansion of accommodations, whether by public or private funds, adequate appropriations to build utilities, such as water, sewer, and telephone services, and roads to serve them are greatly needed. This has been recognized as the role of the Government, but needs caused by rapidly increasing travel have not been met.

Adjustment of rates.—Many reductions in rates to the public have been made with the object of limiting concessioner profit to a 6 percent average return on investment, as provided in the new concession policy. A few increases also were necessary. Reductions in the prices of some articles, notably souvenirs, resulted generally in increased sales volume with no decrease in profit and, in one case, in a noticeable increase.

Unaudited reports continue to increase.—Because of an insufficient staff, the number of unaudited annual reports increased during the year from 638 to 671. This is an unsatisfactory situation to which the Service has repeatedly drawn attention in making its request for appropriations. Regional auditors have been assigned to each of the four regional offices, but they have been forced to spend much of their time on urgent concession administrative matters. If the provision in the pending Interior Department Appropriation Act for four regional chiefs of concessions is approved, the auditors will be released for full-time audit work. A Senate amendment adds \$100,000 for a temporary auditing staff to work on back audits, but a larger permanent staff is badly needed. This work must be brought up to date, and kept current thereafter.

The Loeffler contract.—Considerable public attention and much critical newspaper comment has focused on the contract under which the S. G. Loeffler Co. operates the public golf courses in the District

of Columbia on National Capital Parks lands. This was the subject of hearings before a subcommittee of the House Committee on Public Lands on March 29, May 2, and June 8 and 9.

Announcement that the expiring 5-year contract for operation of the golf courses was to be renewed by the Department in order to permit the concessioner to recover his considerable investment of earnings in facilities, brought a protest from the District of Columbia Recreation Board. Discussions with the Board 5 years previously, looking to the possibility of their operating the courses, had been without result, because of their refusal to accept the Department's rules and regulations. Following audits of the Loeffler Co.'s books by both the Service and, later, at the request of the subcommittee, by personnel from the General Accounting Office and discussion of many elements of the operation in subcommittee hearings, negotiations are again under way for a transfer of responsibility for the golf course operations to the Recreation Board.

Negotiation of new contracts difficult.—A new contract, for the operation of concessions at Zion, Bryce Canyon, and Grand Canyon (North Rim) National Parks, has been made with the Utah Parks Co. for a term of 20 years which began on January 1. The company has agreed to expand accommodations as they may be required.

In August, the Department released a list of 19 contracts which had expired or would expire by December 31, 1949, and invited proposals for taking over and operating the concessions. The response was slight and mostly by persons with little capital to invest. Where no other proposals have been received, negotiations are under way with old concessioners who have given satisfactory service. The inability of concessioners to finance needed expansion is the major difficulty in current negotiations.

At Lassen Volcanic National Park, the Lassen National Park Co., which has accepted an extension of its contract to May 1, 1950, has advised that it cannot enter into a new contract, due to inability to finance new developments. Consequently, a new concessioner is being sought who will be able to furnish the service required.

Negotiations are under way for the studio concession of Haynes, Inc., and the Hamilton bathhouse concession at Yellowstone, the Glacier Park Transport Co. at Glacier, and the Mountain Observatory and Lamar Bath House at Hot Springs.

No action has been taken by the Congress on legislation which would authorize Government purchase of the assets of the Rainier National Park Co. The endeavor to interest others in buying these facilities and providing additional accommodation has been unsuccessful. However, service has been continued by the company, by an extension of its contract to December 21, 1949.

Such further action as may be possible will be taken on other expiring contracts before the end of the calendar year. The smaller concessions which require little capital investment will be covered in the future by business concession permits, rather than contracts.

Concession labor regulations changed.—New regulations governing the conditions of employment for concessioners employees, issued by Secretary Krug to become effective January 1, 1949, changed previous regulations to provide (1) a minimum wage of 40 cents an hour, (2) time-and-a-half pay for all time over 40 hours a week, instead of time-and-a-quarter for all over 48 hours a week, (3) application of State labor law standards wherever they are higher than those of the Department, and (4) elimination of regional wage boards.

Following hearings, the new regulations were modified to provide (1) time-and-a-quarter pay for work in excess of 48 hours during 1949, (2) time-and-a-half for over 44 hours per week during 1950 and 1951, and (3) time-and-a-half for over 40 hours per week beginning January 1, 1952.

DEVELOPMENT PROGRESS LIMITED

For the 1949 fiscal year, the National Park Service received appropriations of \$1,652,350 for physical improvements, \$3,110,000 for roads and trails, and a contract authorization for parkways amounting to \$2,680,000. Of the first sum, \$115,000 was allotted for rehabilitation of structures and utilities that had fallen into disrepair during the war; of the second, \$2,500,000 was allocated to maintenance of roads and trails. Most of the remaining funds are being used to further the progress of projects started but not completed prior to the war.

The backlog of needed physical improvement projects throughout the National Park System has pyramided to an estimated cost of \$140,000,000, of roads and trails projects to \$175,000,000, and of authorized parkways to \$181,000,000. Thus the estimated present needs for development come to a total of \$496,000,000.

Though handicapped by the necessity of spreading 1949 funds for physical improvements over a large number of areas and, consequently, by inability in many cases to contract for whole projects at one time—a costly handicap—or even to interest contractors because of the smallness of individual projects, the year has brought a few significant and encouraging advances. The largest single project under way is that at the Statue of Liberty National Monument, for which \$500,000 was earmarked by Congress. The improvements at this area are well started. Five construction contracts have been completed or are in progress. These involved grading, building obliteration, installation of a heating system in the statue, storm drainage,

and fabrication of interpretive devices. The present program will be augmented by the allotment of additional funds in 1950 primarily for work at the west landing and the turning basin. With substantial completion of all these, the appearance of the monument—so long and regrettably an eyesore—will be greatly improved.

Field studies, surveys, and plans have been in progress throughout the year for projects which will be programmed for construction in the fiscal year 1950 and later. Meantime, most of the undesignated balance of physical improvement funds has had to be used for rehabilitation of existing facilities elsewhere in the system. These funds have been used on a wide range of small but greatly needed projects such as campground, picnic, and beach developments or improvements; the installation, extension and replacement of worn-out or inadequate utilities systems; comfort stations; ruins stabilization; and employee housing of both permanent and temporary character. Thus acute needs have been somewhat alleviated in some of the areas.

Communications systems.—Throughout the system, protection is seriously handicapped by the lack of adequate internal communications. However, real progress was made in improving the situation for the system as a whole. At a cost of \$29,456 of physical improvements funds for the purchase of radio equipment, FM systems were installed in Everglades National Park and along the Blue Ridge Parkway, and a radio telephone system was set up at Mount Rainier National Park.

In addition, the Service obtained from surplus a large amount of communications equipment, valued at \$225,000, and placed it in operation. The carrier telephone equipment now in use at Mesa Verde and Glacier National Parks, and in the Region Three office at Santa Fe for communication with the southwestern national monuments, was so obtained. Surplus radio equipment has also been shipped to Tupelo for communication along the Natchez Trace Parkway. Plans for the extension of Olympic National Park's communication system were completed.

Administration will be greatly facilitated by the two-way radio communication service established between Hawaii National Park headquarters at Kilauea, on the Island of Hawaii, and the Haleakala section of the park on Maui. On-the-spot reporting of the eruption of Mauna Loa, which began on January 6, was made possible by portable radios installed at the summit.

Progress made on road jobs.—Unlike 1948, when labor and materials were scarce and bids on road jobs inordinately high, the Service has been able to enter into favorable contracts for 10 essential road construction projects during 1949. However, slightly less than

\$1,000,000 of roads and trails funds were available for new construction.

Construction projects were launched in Colonial National Historical Park and in Great Smoky Mountains, Shenandoah, Yellowstone, Rocky Mountain, Zion-Bryce Canyon, Yosemite, and Sequoia and Kings Canyon National Parks. In addition, a day-labor project was started on the Loop Highway in Lassen Volcanic National Park under Bureau of Public Roads supervision.

These contracts and the day-labor job consumed all the available roads-and-trails construction funds except \$132,000 which had been earmarked by Congress to construct part of the Heintooga Road in Great Smoky Mountains National Park. This sum was insufficient to cover any contract that would not cost inordinately for the amount of work that could be accomplished. It was, therefore, deferred until enough additional money could be made available to permit construction at reasonable cost.

Maintenance of roads and trails.—Estimates indicate an average cost of \$571 per road-mile for maintenance of roads in the National Park System, approximately 75 percent of the national average. For trails the figure is \$59 per mile. Of the total available roads and trails funds, it was possible to apportion only \$320 per mile for road maintenance, and \$42 per mile for trails. Consequently, not all roads and trails in the system could be given even routine maintenance; and much old equipment, long past economical operation, had to be kept in service for another year, with attendant high operating costs.

A result of this situation is that the public is not served by adequately maintained roads and trails. And the ultimate cost is higher; necessary reconstruction, which could be postponed for many years if proper care could be given year after year, is greatly increased.

In order to meet this situation more realistically, a maintenance program, based upon the expectation of increased roads and trails funds in the 1950 appropriation and in subsequent years, has been evolved on the following basis:

(a) A 5-year program for liquidating the backlog of war-deferred special maintenance items before they reach the reconstruction stage has been established. This calls for the expenditure of \$3,500,000 in 1950, and increases annually to \$3,900,000 in 1954. Thereafter, with the deferred items liquidated, funds for this program can be reduced. It will then be possible to establish a preventive maintenance program on an annual routine basis. Such expensive items as resealing, reprocessing, and vista clearing will be programmed regularly for sections of highway, rather than be allowed to accumulate by whole routes and whole areas, as they have had to be in the past.

(b) An equipment amortization program which will provide more adequately for equipment requirements than has been possible in previous years has been established for 1950.

Maintenance funds have to be spread out over 5,215 miles of heavily used roads and over more than 7,000 miles of trails in the National Park System.

Parkway construction moves ahead.—Although the 1949 appropriation act contained no appropriation for parkways, it did include a contract authorization of \$2,690,000. This, with balances remaining in parkway funds, provided the Service with a program of \$9,796,000, of which more than \$8,000,000 was allocated to the road program of the Bureau of Public Roads. Slightly less than \$1,000,000 of the balance was available for roads and trails and physical improvement projects handled by the Service itself. Work was under way or completed on 94 such projects. Blue Ridge Parkway projects completed under the latter program included the gas station and coffee shop at Bluff Recreational Area, and the Peaks of Otter bus terminal, starting point for the Sharp Top bus trip.

Lack of title to right-of-way for the Gatlinburg Spur connection held up construction on the Foothills Parkway, in Tennessee. On the Natchez Trace Parkway, lack of right-of-way in both Mississippi and Tennessee has held up construction of three grading projects. Because 1949 funds for the Tennessee portion were earmarked in committee, almost a million dollars which might have been put to use on other parkway jobs has lain idle.

On the Blue Ridge.—The completion of a paving contract in the fall of 1948 opened up a unit of 47 miles from Rock Fish Gap south to U. S. Route 60, so that the motorist can now travel 155 miles on continuous paving, including the Skyline Drive in Shenandoah National Park. In North Carolina, completion of 30 miles of paving offered 53 miles of surfaced road south from Blowing Rock to the newly built State road to Mount Mitchell at Swannanoa Gap. The completion of grading and construction on one section sometime during the present fiscal year will open up a long unit of the parkway and give access direct to the city of Asheville by way of North Carolina Route 694. Only one short stretch of 5 miles, for which funds are not available, remains to be built to connect with U. S. Route 70 at Oteen, 4 miles north of Asheville.

Along the Natchez Trace.—Fifteen bridge and overpass projects were either completed or under construction during the 1949 fiscal year. The opening up of a 58-mile unit from Ridgeland, just north of Jackson, Miss., northeasterly to Kosciusko, awaits completion of several of these structures. Three grading projects which are ex-

pected to be finished sometime this summer will connect the unit north of Jackson with a previously graded section north of Kosciusko. Additional funds are needed for paving these several units. When that is done, it will be possible to open to public use a continuous section of 90 miles.

The George Washington Memorial Parkway.—The principal work on this parkway, which parallels the Virginia shore of the Potomac River, was the grading of a connection between Key Bridge and Lorcom Lane, approximately 1 mile which, when paved, will greatly facilitate traffic connections between the parkway and the Lee Highway in Arlington County.

Parkway summary.—For all parkways, major road projects costing \$2,565,200 were completed; others to cost \$7,771,400 were under construction.

Storms cause havoc.—Floods and the exceptionally heavy snowstorms of last winter caused unusual damage to roads and trails and to utilities and buildings in many areas in the National Park System and required the allotment of considerable amounts from limited funds for repair.

Flood damages in Glacier and Mount Rainier National Parks; the removal of down timber from Mount Rainier roads; the restoration of flood-damaged trails in Grand Canyon National Park and Bandelier National Monument; repairs to bridges in Acadia National Park; and repairs to roads and trails in Mammoth Cave National Park, Colonial National Historical Park and Catoctin Recreational Demonstration Area required special allotments amounting to \$118,914.56. In five areas \$22,560 was expended from reserves for unusual snow-removal operations in addition to the normal allotments. A special allotment of more than \$68,000 had to be made for repairs to buildings and utilities damaged by storms.

Surplus property transfers assist the Service.—The National Park Service continued to benefit from the authorization contained in Public Law 841 to acquire surplus roads and trails equipment and materials and supplies, without exchange of funds, from the National Military Establishment and the War Assets Administration. During the year, the value of such transfers exceeded \$322,000.

While these transfers have been of help to the Service at a time when it had little money to expend on the replacement of outworn equipment or of equipment which was commandeered by the military authorities at the outbreak of the war, the condition of that received from surplus was, for the most part, only fair and it has been difficult to obtain replacement parts which most of them needed to put them in repair. For the efficient and economical performance of maintenance and repair activities, early replacement of most of the equip-

ment in use throughout the National Park System is urgently needed.

Soil and moisture conservation.—During 1949, with an allotment of \$95,000 from the Department's Soil and Moisture Conservation funds, work was carried on in 13 areas, most of which are situated in the South and Southwest, but substantial increases in the number and scope of surveys, erosion-control plans and projects are needed. To bring erosion under control on areas where that is needed, to a point requiring thereafter only normal maintenance, it is estimated that about \$300,000 a year should be expended on this work over the next decade. Funds made available to the Service since the Department's program was started in 1951 have averaged only \$50,000 a year.

On historical areas, where it is desirable to maintain open fields to display conditions approximately as they were at the time of the historic events commemorated, soil and moisture are being conserved through agricultural use, under permits that require sound handling of the land and the constant enrichment of the soil.

A total of 655 revocable permits for various uses of Service-administered areas were approved during the year. One of unusual interest was issued to the Coast Guard for rehabilitation and use of the old lighthouse at Cape Hatteras. This fine structure was abandoned in the early thirties because of the close encroachment of the ocean. However, due at least partly to the program of sand fencing carried on along the North Carolina barrier islands over a period of several years under National Park Service direction, the sand area has now built up to a sufficient distance from the base of the light to make it safe to resume its use.

THE EDUCATIONAL FUNCTION OF THE NATIONAL PARK SERVICE

Congress, in authorizing the establishment of the National Park Service, enjoined it to provide for public enjoyment of "the scenery, the natural and historic objects and the wildlife" in the areas entrusted to its care. This is a positive injunction. Though the laws insisted that these areas were to be so managed that their qualities should remain unimpaired, their justification lay in their capacity to provide enjoyment, in its best sense, now and in the future. The function of preservation and protection was a means to that end and not an end in itself.

The essential task of the National Park Service, then, is to see to it that the American people shall have the opportunity to obtain the maximum beneficial use and enjoyment of the kinds which derive from the character of the park areas themselves; enjoyment which

at the same time involves the minimum of change in the natural or historic scene which the Service is required to conserve.

To meet that responsibility requires much more than the provision merely of access and shelter. It involves more than satisfaction to the physical senses through the experience of outdoor life in a beautiful setting. It places on the Service the obligation to contribute to a deeper understanding of natural processes and historical events about which any intelligent human being has a natural and legitimate curiosity.

It is education.—Because the word “education” popularly connotes a somewhat formal process, one hesitates to use it in referring to a function of a Government bureau like the National Park Service. Nevertheless, in its sense of “leading out” people of all ages to a fuller comprehension of the world they live in and their place in it, education is a part of the Service’s job, and its contribution to beneficial and lasting enjoyment is as great as that of any activity in which the Service is engaged.

When the visitor to Yosemite asks the man in uniform how that stupendous valley was formed; when he stands on the Rim of the Grand Canyon and wants to know how long it has taken the muddy Colorado to work its way down through a mile of rock; when he climbs to the terreplain of the Castillo de San Marcos and seeks to learn just what was the purpose of that ancient fortification; when these questions are multiplied by thousands and the Service must satisfy them or be convicted of doing its job inadequately, then it is in the business of education “up to its neck.” It couldn’t get out of it if it wanted to—which it doesn’t.

The Service is then, in a sense, an educational agency. Its intent is to do its educational job well. If this work—which has come to be called its “interpretive program”—is to be effective, it must be enjoyable; it must be informal; it must stimulate as well as satisfy healthy curiosity; it must widen the mental and spiritual horizons of those who take advantage of it. Equally, to attain these ideals, the Service must have adequate and qualified staff, and adequate physical equipment. This equipment must reflect modern education progress as, for instance, in the effective use of visual materials.

A corollary product of this program is bound to be a more thoughtful and intelligent regard for the worth of the parks themselves. This will undoubtedly lessen the carelessness and vandalism which so seriously trouble the administrators of all kinds of public reservations.

The Service is constantly adopting new methods and techniques in its effort to meet the tremendous demand, but it can scarcely claim to be doing the job that the public expects of it with full effectiveness. Both staff and physical equipment are overwhelmed by, and woefully

inadequate for, the requirements put upon them. Museums are needed in many areas. These are not, and should not be, places where miscellaneous collections attract the idly curious. They should rather contain carefully selected and effectively presented items that contribute to better understanding of the areas in which they are situated, and of the National Park System of which those areas are a part. In all but a few areas, our museums are either outgrown or nonexistent, or they represent an effort to tell a story with crude or inadequate tools.

In other phases of interpretation, there is serious loss of effectiveness because of the day-after-day overload on staff members. On guided trips, the number of visitor participants per naturalist or historian tends to be several times as great as can be satisfactorily served. In such places as Carlsbad Caverns, or Mammoth Cave, this loss of effectiveness is complicated by the fact that control of the visitor, to prevent damage to delicate natural formations, is made difficult or impossible.

In many cases, the capacity of existing facilities is far below the present-day requirements. For example, at the Yavapai Observation Station, on the South Rim of the Grand Canyon, scene of perhaps as striking and effective an example of interpretation as is offered anywhere in the National Park System, the space is so seriously overtaxed as to cause discomfort and justified dissatisfaction.

Despite handicaps, progress during the year just past has been notable in many respects. The public reaction has been highly gratifying, both in volume and in the quality of response to the efforts put forth.

In the scenic-scientific areas, attendance on 17,284 conducted trips totaled 1,037,648. Naturalists gave 15,195 talks, such as those given at Yavapai, mentioned above, or at evening campfire programs, and at these there was an attendance of 1,212,729. Individual contacts at information stations of various kinds came to a total of 4,060,334. Visitors who made use of unattended interpretive stations or devices totaled 4,658,284. In addition, about 10,000,000 persons visited the historical and archeological areas during the year; almost all made some use of interpretive facilities of one kind or another.

Museums.—In a typical park or monument, the museum is probably the most important element of the interpretive work carried on there, save only for competent personnel. It is the focal point about which the program revolves.

Two museum developments, both completed before the end of the fiscal year, have made an exceptionally favorable public impression. A completely new and effective museum exhibit at Manassas National Battlefield Park was opened to the public on May 28. The general public has given evidence of its interest by doubled visitation during

the months since the opening; and such students of the Civil War as Dr. Douglas Southall Freeman and Otto Eisenschimmel have praised the new display with enthusiasm.

Manassas presents an acute problem of interpretation, since it is the site of two major battles, and since the small park staff cannot provide enough personal service to explain the complicated story. Yet the visiting public want to know. The new museum is designed to meet this particular situation; to present the facts fairly and impartially, but in vivid and striking fashion.

The new permanent museum exhibits at Guilford Courthouse National Military Park, thrown open to the public on July 4, 1949, were virtually completed before the end of June. These exhibits are of the same effective quality as those at Manassas.

In both museums are striking dioramas. That at Manassas portrays a tense and dramatic moment during the first battle; that at Guilford shows the final charge of William Washington's cavalry and the First Maryland Infantry at the height of the battle.

At Kings Mountain National Military Park a modern museum was built and most of its exhibits installed before World War II. These installations have now been completed. Since the park has no historian, the electric map, which visitors can operate themselves, helps them to grasp the story of the American pursuit and the British retreat which ended at Kings Mountain. The Jackson wing of the Museum at Scotts Bluff National Monument was nearing completion at the end of the year. There preparations were under way for the installation of a series of paintings by the late William H. Jackson portraying the Oregon Trail and typical scenes of the migration which followed it a century ago, donated by the American Pioneer Trails Association. Since the Oregon Trail is now largely traversed by modern highways, it is not easy for the modern traveler to visualize conditions during the emigration, but this fine series of paintings will undoubtedly help to make them vivid and real.

During the year several other individuals and organizations donated funds, exhibits, and skilled assistance to the Service for museum development. Hui-O-Pele, an organization whose funds are derived from \$1 membership certificates sold to Hawaii National Park visitors, has earmarked up to \$10,000 for exhibits for the park museum. The Avalon Foundation gave an additional \$40,000 for the development of the mansion at Hampton National Historic Site as an historic house museum. The New York Chapter, Colonial Dames of America, donated antiques valued at \$10,000 to furnish the upper floor of the Ford Mansion, at Morristown National Historical Park. A staff member of the California Academy of Sciences generously donated his

time and skill to the cutting and polishing of more than 100 pieces of petrified wood for the museum at Petrified Forest National Monument.

The Islesford Museum on Little Cranberry Island, Maine, which contains the valuable collection and library on the history and culture of the Mount Desert region assembled by Prof. Wilkin O. Sawtelle, was added to Acadia National Park by gift.

Preservation of the valuable scientific and historical collections of the various park areas remains a museum problem of increasingly serious concern. The Gettysburg cyclorama was given emergency treatment to arrest its deterioration, and special study was given to the deterioration of rare fabrics at the Vanderbilt Mansion. A survey has been started to determine the collections in the most urgent need of safe storage and preservative treatment.

Exhibits for park museums are prepared in a central laboratory, so that even the smallest and most isolated museum has the advantage of a skilled staff of curators and preparators. Centralization of this sort of work not only permits the production of a high quality of exhibits that would otherwise be impossible but is far more economical than any other possible method.

Guided trips.—Trips, afoot or by automobile caravan, guided by qualified naturalists or historians, are offered in a large number of areas. These offer a fine mental stimulation with a large dividend of spiritual values, pleasantly combined, in the case of walks, with mild physical exertion. Each year sees constantly greater numbers of visitors participating in them—added proof that visitors are hungry for knowledge of what the parks contain. Too many participants per guide impairs the effectiveness of these trips. At Yellowstone National Park, for example, attendance on guided trips often exceeds 150 per naturalist. Even when he is equipped with a megaphone, he finds it difficult to make himself heard. At times there is confusion and crowding, endangering the formations in the geyser basins, and also endangering the people. Where catwalks have been provided, it is virtually impossible to confine such large groups to them. It is also impossible effectively to prevent acts of vandalism, such as marking the formations or throwing trash in the pools.

At Mesa Verde, on trips during which parties enter a ruin such as Spruce Tree House, there should not be more than 40 persons under the guidance of a single naturalist; yet there are frequently as many as 100, compelling serious consideration of further measures to restrict access. Many people find the experience of entering an ancient dwelling memorable and thrilling, so that the Service adopts restrictive measures with reluctance and only when they are unquestionably necessary.

Campfire programs and lectures.—Evening campfire programs, an established institution in many of the national parks, serve several

purposes. While the primary purpose may be to inform, they are important also in providing something pleasant and interesting to do during the evening. Their informal character and the fact that, in many places, group singing is the opening feature, is valuable in establishing a relationship of confidence between the audience and the participating Service personnel. It provides a fine opportunity to make park visitors aware of the many-sidedness of the interpretive program, to inform them of the purposes of the National Park System, and to enlist their cooperation in protecting it. Audiences at these evening programs and at analogous daytime programs were almost without exception greater than during any previous year.

Making a virtue of necessity.—In order to widen the scope of the program, and to reach more people than can be served directly by the interpretive staffs, the past year has seen considerable experimentation in the development and use of self-operating interpretive devices.

The increasing numbers of visitors to the Lincoln Museum, in Washington, D. C., made it necessary to install a magnetic tape recording of the talk on Lincoln, with an automatic slide changer, since staff members could not repeat the talk as frequently as demanded. Self-operating electric maps and automatic slide changers have been installed at Manassas National Battlefield Park, and at Guilford Courthouse and Kings Mountain National Military Parks.

In Lassen Volcanic National Park, mutilation of trail signs and theft of markers caused the development of three nature trails along which the outstanding features were each marked only by a number. The corresponding number and the scientific interpretation of the feature were then incorporated into an information leaflet. The leaflets, produced with contributed funds, were made available at a bulletin board at the beginning of each trail. Similar trails are in use at Mount Rainier National Park, at Gran Quivira and Walnut Canyon National Monuments, and at the detached Montezuma Well section of Montezuma Castle National Monument. Natural history associations at Lassen and Mount Rainier and the Southwestern Monuments Association have supplied the funds for the leaflets on which these devices depend.

These methods of providing information are without question useful, but they are definitely inferior to services provided direct by competent and interested personnel. The information given is of necessity limited so that not all the questions which naturally arise in connection with their use are answered. Chiefly, however, they are "cold," and incapable of evoking the kind of response so frequently and happily aroused by a person full of his subject, enthusiastic about it, and capable of kindling enthusiasm in others.

Studies of interpretive activities.—Three excellent studies which analyze and appraise park interpretive activities were made during

the past year by university research students. All three studies recognize the public need for understanding, the contribution of the interpretive programs to heightened enjoyment and better use of the parks, and their influence in reducing misuse and vandalism. All point to inadequacies of personnel as serious handicaps to the accomplishment of these objectives.

The printed word.—Attractive, reasonably comprehensive and carefully edited printed matter is essential to knowledge and enjoyment of any individual park or historical area. The past year saw a constant improvement in the quality of the literature available alike to visitors and other inquirers. For its exceptionally attractive appearance, the Service is greatly indebted to the design staff of the Government Printing Office.

During recent years, it has been necessary to practice the utmost economy in connection with this publications program, through reductions in size and limitation of quantities. In many instances, funds have not been sufficient to permit production of sufficient numbers of copies. Removal of the limitation on printing and binding in the pending 1950 appropriation act, which has been a severe handicap in the past, is expected to make it possible to provide sufficient publications to meet legitimate public demand. The supplying of quantities of publications to automobile clubs, travel bureaus, and other outside agencies must, however, continue to be subject to strict limitations. For the system as a whole, an adequate annual production of publications will come close to 10,000,000 pieces.

Launched on a modest scale during the past year was a program of replacement of the series of 16-page sales publications on historic and archeological sites with a new series of handbooks in a smaller, more attractive format and with more comprehensive content. A few other sales items were included in the year's program.

Natural history associations and analogous "official cooperating organizations" continued to fill in the gap caused by the insufficiency of appropriated funds for printing, by producing a number of distinctive and valuable interpretive publications. The proceeds from the sale of these association publications are utilized in various ways to assist the interpretive programs in the parks.

PROGRESS IN THE HISTORICAL FIELD

Ancient Spanish forts made national historic site.—The establishment of the San Juan National Historic Site, Puerto Rico, was one of the most gratifying developments of the past year. Included in it are the gigantic fortifications of El Morro, on the outer point of the island of San Juan; San Cristobal, rising high above the northern shore of the island less than a mile away; the Casa Grande; the forti-

fied walls connecting El Morro and San Cristobal and extending around the harbor side of the island; and El Canuelo, on a former island, now a peninsula, across the harbor entrance.

The status of this site is unique. Primary jurisdiction over it is retained by the Department of the Army, which continues to use it for military purposes. The agreement between the Departments of the Army and the Interior, which provided the necessary basis for the site designation, gives the Service responsibility for the interpretive program and the handling of visitors and for advising the Army on the preservation and restoration of the fortifications.

Preserving historic structures.—Noteworthy progress in repair and stabilization of historic structures can be recorded for the year. At Castillo de San Marcos National Monument, in Florida, the footings of the fort walls were stabilized, the walls repointed, and the old tide gates to the moat found and measured drawings made of them. The historic Ford Mansion at Morristown National Historical Park underwent structural rehabilitation and painting. Generous additions to the funds originally donated for "Hampton," supplemented by still other funds to match other donations, have made possible the extensive repair and rehabilitation in progress at Hampton National Historic Site.

Stabilization and protection work were completed at Fort Matanzas, Fla., last March. Various prehistoric adobe structures in the Southwest were stabilized, as part of the continuing program of such work in these areas, for which highly skilled workers have been developed.

Following close upon the establishment of the San Juan National Historic Site, plans have been made for the preservation and repair of the historic fortifications, oldest masonry structures under the American flag. The Department of the Army has indicated deep interest in this work and will seek funds with which to carry it on. Much of it is very greatly needed to prevent even more serious damage.

The restoration of the McLean or Surrender House at Appomattox Court House National Historical Monument was completed just too late to permit dedication on the 1949 anniversary date of Lee's surrender. This is now planned for April 9, 1950.

In connection with the project for preserving and cleaning the frescoes of the ancient mission at Tumacacori National Monument, the Service was fortunately able to obtain advice and assistance from an outstanding authority, Dr. Rutherford G. Gettens of the Fogg Museum of Art, Harvard University. Guided by his recommendations, Tumacacori's fine old frescoes and plaster work are being cleaned and restored.

A beginning has been made also on the repair and rehabilitation of the Perot-Morris House in Germantown, Pa., recently donated to

the United States by the heirs of the Morris family, which has owned it since 1934. Mrs. Elliston P. Morris of Philadelphia has generously left on indefinite loan, for display there in connection with its operation as a house museum, handsome suites of period furnishings. The house will be a part of the Independence National Historical Park. It will be operated, however, by the Germantown Historical Society.

Archeology on historical areas.—The methods of archeology, applied to historical areas, continue to produce gratifying results in several Service areas. The outlines of the fort built by the "lost colonists" at Fort Raleigh, N. C., were definitely established. Excavation of the site of the first house and the main mission house, at Whitman National Monument, has been completed, and work on other excavations is continuing. The house occupied by Dr. John McLoughlin, chief factor of the Hudson's Bay Co. and the priest's house are among the buildings which excavation at the Fort Vancouver National Monument Project has uncovered and identified. There 40,000 artifacts have been uncovered.

Excavations at Glass House Point, on Jamestown Island, uncovered unmistakable evidence that the early settlers there undertook the working of glass soon after the colony was established. The remains of four furnaces, and of ashes, clinkers, crucible pots, and pieces of glass were uncovered.

Service cooperation with historical conservation groups.—The National Park Service continues to participate in and encourage the efforts of nongovernmental agencies in the preservation of sites and objects of historical importance. The work of these agencies is important since many sites, for which the Federal Government cannot and should not assume primary responsibility, deserve protection.

Late in the summer of 1948, the National Council for Historic Sites and Buildings, of which the Director of the National Park Service is an ex-officio member and the Service's chief historian is secretary, established an office in Washington, D. C. A major objective of the council, which brings together the forces of 36 national organizations and agencies, is the establishment of a national trust for historic preservation in the United States, to be modeled on the English national trust, but adapted to the principles of American law. Toward this objective, the Service has given advice and assistance, while the Department has sponsored the introduction of authorizing legislation in the present Congress.

In June, the Service, Colonial Williamsburg, Inc., and the American University jointly sponsored and participated in an Institute in the Preservation and Interpretation of Historic Sites and Buildings. The institute brought to Washington and Williamsburg students from such faraway places as Florida and California. The

Service was also asked for, and gave, advisory assistance to the Thomas Jefferson Birthplace Memorial Park Commission, which had purchased the "Shadwell" estate on which Jefferson was born. This purchase is typical of what private and local historical groups are undertaking.

Archeological and paleontological research.—Fourteen reputable scientific-educational agencies conducted 16 separate field research programs on Federal lands during 1948 under Antiquities Act permits granted by the Secretary of the Interior. Findings included evidence of the earliest known type of American dwelling (3000 to 2000 B. C.), in California, and the earliest known ancestor of Indian maize, a diminutive pod corn dated about 2500 B. C., in New Mexico.

Five national monuments and one national park are included among the areas on which 28 research programs were scheduled for this summer by 13 universities, 1 college, and 7 museums.

Increasingly effective enforcement of the provisions of the Antiquities Act can be noted. Dr. Jesse L. Nusbaum, archeologist in the Region Three office in Santa Fe, also serves as consulting archeologist for the Department. In that capacity, he checks the plans and the qualifications of research groups and investigates reported violations of the Antiquities Act.

Theodore Roosevelt National Memorial Park dedicated.—Sponsored by the Greater North Dakota Association, a State-wide organization of chambers of commerce and business and professional men, the dedication of the Theodore Roosevelt National Memorial Park on June 4 was notable in a number of respects. It was held in a natural amphitheater with the picturesque Badlands as a backdrop; it attracted an estimated 25,000 persons; a half-hour of the program, during which Representative William Lemke and Senator Milton Young, both of North Dakota, and Secretary Krug and Director Drury were speakers, was carried nationally by the National Broadcasting Co. (reported to be the longest national broadcast ever to have originated in North Dakota); it was attended by an exceptionally distinguished group of special guests. Gov. Fred G. Aandahl of North Dakota acted as master of ceremonies for the entire program, which lasted an hour and 50 minutes, and was broadcast by six stations in North Dakota and Montana.

Supplementing the dedication program, a series of 11 scenes of North Dakota history was presented at as many points along the main road through the south portion of the park. The entire program was a credit to the association and evidenced the keen interest of the entire State and its neighbors in this unique and picturesque area, which so strongly influenced the career and the thinking of Theodore Roosevelt.

THE WILDLIFE OF THE NATIONAL PARK SYSTEM

In the national parks, all forms of wildlife are, in theory, left to shift for themselves. This *laissez faire* method of management—or nonmanagement—would probably be wholly practical in very large areas in which there was a proper balance of seasonal range and of favorable habitat in which normal relationships had not been much disturbed. However, such conditions cannot be said to exist in any national park, no matter how extensive. Each is affected by human influences, past or present; normal winter range has been taken over by grazing or agriculture; some predator species have been reduced in numbers; any of a number of processes have disturbed natural relationships in such fashion that positive management is occasionally required. This is undertaken to keep relationships from getting so far off balance as to threaten the extermination of a species, directly or indirectly.

In Yellowstone National Park the increasingly serious problem is one of winter range for the great elk herd which frequents the northern part of the park. Herd reductions have not been sufficient to halt the depletion of the important browse species on which it relies for food. It is estimated that the elk will number 11,000 this fall and that the winter range will not support more than 5,000 if its condition is to have a chance to improve materially. Refusal of the Montana State Game Department to permit hunters to harvest enough elk north of the park leads only to the conclusion that, to save the remaining range and the associated wildlife, the Service itself will be forced to effect a drastic reduction.

In the east-central part of Rocky Mountain National Park, immense changes have been and are being wrought in the vegetation by too numerous mule deer and elk. A reduction of about 75 percent of these animals is necessary to permit the range to recover. Plans to initiate this reduction last winter were canceled because of local objections to the disposal of the carcasses to needy Indians.

On much of the periphery of Glacier National Park, mule deer and elk have insufficient winter food. Experiments with salt to entice the elk from the park to open hunting territory offer some possibilities for at least a partial solution of the problem along the west side of the park.

In Zion National Park controlled killing of mule deer was continued to restore the vegetation in Zion Canyon. There, shrubs once seriously damaged show much improvement. On the plateaus east and west of the canyon, however, destruction of range continues unchecked. Most of the animals responsible are available for hunting,

during the season, outside the park; but the surrounding region is sparsely populated and the light gunning pressure has no appreciable effect.

Black bears still present a dangerous problem, mainly visitor-caused, in Yellowstone, Glacier, Yosemite, Sequoia, and Great Smoky Mountains National Parks. Despite repeated warnings, a small minority of visitors persist in feeding these animals. The number of injuries is remarkably small, but traffic is often snarled along heavily traveled roads and accidents result from the congregation of visitors around "roadside" bears. Their appetites for artificial foods whetted by promiscuous feeding, some of these animals make serious nuisances of themselves by breaking into buildings and automobiles in search of food.

Encouraging developments.—Several parks established in recent years have included lands long settled, in which many species once numerous there had been depleted or had disappeared. The Service practices or encourages restocking when it is possible to obtain stocks of the subspecies formerly found in these areas. Several efforts at restocking during recent years have had encouraging results. During the past 2 years, with the cooperation of the Kentucky Game and Fish Division, 36 whitetail deer have been released in Mammoth Cave National Park. These animals have ceased to roam widely and are reproducing. The park administration also obtained four pairs of ruffed grouse of the native subspecies and released them in excellent condition. These birds have been rare, or possibly extinct, in the park and its vicinity for many years.

The Service is indebted again to the Texas Game, Fish, and Oyster Commission for an additional stocking of antelope in Big Bend National Park. The bands now in the park total about 100 head.

The Rocky Mountain bighorns released in Mesa Verde National Park several years ago have prospered, apparently, as several lambs have been produced. The band ranges widely and does not remain within the park.

Other rare species.—The first seen in some years, two grizzlies were sighted in Grand Teton National Park during the summer of 1948, and other signs of them were observed. Two rare animals, the wolverine and the fisher, seem to be increasing in Sequoia and Kings Canyon National Parks. A survey of the Sierra bighorn in those 2 contiguous parks revealed about 200 animals, though it is possible that the population is twice as great.

Dall sheep, in Mount McKinley National Park, after having reached a disturbing low, are definitely on the increase. Trumpeter swan in Yellowstone National Park and contiguous territory appear to be, also. An aerial census revealed at least 49 adults and 13 cygnets in

the park, and 8 adults and 4 cygnets on nearby waters to the south. The sight of 5 nene or Hawaiian geese on Mauna Loa, in Hawaii National Park, has raised hopes that this rare bird may become reestablished there. To relieve destruction of vegetation there and to aid wildlife, the park staff destroyed, during the first 10 months of the year, 3,006 goats, 261 pigs, 44 mongooses, and 4 feral house cats.

Poaching.—Illegal destruction of wildlife continues to be serious in a number of areas. Poaching, together with natural losses during the blizzards last January, reduced the Wind Cave National Park antelope to the lowest number during the past decade. The marked scarcity of goats, deer, and hair seals in Glacier Bay National Monument, where the Service has no protective staff, is ascribed largely to poaching.

Fishery management.—Approximately 5,132,000 fish, including 2,170,000 eyed eggs, were planted in the waters of 16 areas. Practically all of the eyed eggs were placed in Yellowstone National Park waters.

Two fishery problems are causing much concern. Because of the pressure of numbers, many popular fishing streams and lakes have been depleted of the larger fish, and anglers are dissatisfied. Stocking of legal-size fish is highly expensive and is unsatisfactory in national park areas for several reasons. It is becoming apparent that, to protect the streams, angling pressure must be restricted within the rather limited natural carrying capacity of the mountain waters.

The second problem is that of overfishing by commercial interests in Florida Bay, much of which is ultimately to be a part of Everglades National Park. Not only is future commercial and sport fishing endangered there by destructive methods of fishing; the food supply of many kinds of aquatic birds—ibises, herons, roseate spoonbills, cormorants, pelicans, and others—which are dependent on a continued supply of small fish and other aquatic life, is being seriously depleted. Florida Bay needs to be added to the park, and proper protective regulations established and enforced, at the earliest possible moment.

PROTECTION OF PARK FORESTS

Fire control.—Except for 1944, the calendar year 1948 witnessed the smallest number of forest fires in the National Park System of any year since 1933; yet the costs were higher than normal, and the area burned over—24,404 acres—greater. There were 285 fires; 206 of these were man-caused, a marked reduction below the two previous years and especially encouraging, considering that more people visited the parks than ever before.

The costs of fire control have more than doubled during recent years. Salaries and wages, supplies, fire equipment, and transportation

all cost more; the 40-hour workweek, with higher pay for overtime, and the necessity of providing relief personnel to man protection positions full time, add greatly to the expense.

The high costs of suppression last year—nearly \$200,000 for all areas administered by the National Park Service—and 93 percent of the area burned, are attributable to three large fires. On each of these the lack of adequate communications was largely responsible for the excessive size and cost of control. A lightning fire in Isle Royale National Park and two man-caused fires—one in Yosemite and one in Kings Canyon—all started in remote and rugged terrain, far from any roads. They were detected while still small, but in no case was it possible to get a report into headquarters until many hours had elapsed. Thus the prompt dispatch of fire fighters or reinforcements was disastrously delayed.

There seems to be no doubt that each of those fires could have been held to small size, and low cost, had it been possible to report them promptly. Inability to maintain or replace worn-out or obsolete radio equipment or to keep outpost telephone lines in repair during and since the war resulted in greater direct costs than would have been involved in proper maintenance; to those costs must be added the serious damage to the forests and the disfiguring scars on the park landscape. The need of modernizing the communications systems in the forested parks and of rehabilitation of trails and other protection facilities was stressed in the presentations of the Service's needs to the Bureau of the Budget and the Appropriations Committees.

Forty-eight representatives of the Service's three western regions and one from Region One, embracing the east and south, attended the first interregional fire-control conference, held last April in Grand Canyon National Park. The conference reviewed and analyzed mutual problems of fire control, discussed new methods and techniques, and laid plans for improving and intensifying protection.

Plans for dispatching fire-fighting forces and equipment in forest-fire emergencies have been enlarged and coordinated for all regions on a Service-wide basis. These have been strengthened through the cooperation of the air-rescue service of the United States Air Force in extending assistance on fires.

The extraordinarily severe winter of 1948-49 has created a serious fire hazard in Mount Rainier National Park. Ice and snow frozen to the trees combined with high winds to produce thousands of broken or down trees. Though the work of clearing roads and trails of fallen trees has progressed steadily, the extraordinary amount of debris which must remain untouched will be a cause of concern for some years.

Protection from insect epidemics.—Congress again appropriated funds to continue the program of control of the mountain pine beetle in the lodge-pole pine stands of the Targhee and Teton National Forests, Grand Teton National Park, and Jackson Hole National Monument. However, the appropriation was made so late in the spring of 1949 that it was possible to accomplish only about 44 percent of the work in Grand Teton and Jackson Hole before the beetles emerged from the infested trees. As a result, the program will have to be extended over a longer period.

Observations last spring indicated that the needle-miner population of the white fir in Bryce Canyon National Park had been materially reduced, as a result of the spraying of approximately 1,000 acres with DDT from the air in July 1948. Previously, this infested stand appeared doomed.

An infestation of spruce budworm is building up in the Nyack Valley section of Glacier National Park. A survey of this area by representatives of the Bureau of Entomology and Plant Quarantine is planned for this summer to determine the necessity of treatment to prevent the spread of serious damage.

Blister rust control.—In eight areas of the National Park System a vigorous program of *Ribes* eradication for the control of white pine blister rust was carried forward. The bulk of the work was in Yosemite, Sequoia, and Kings Canyon National Parks. Initial work was performed on 6,654 acres, with reeradication on 15,161 acres.

In the East the rust was found on white pine in Great Smoky Mountains National Park for the first time last spring, 75 miles south of any previously observed infection on pines. It was found on *Ribes* in the Smokies for the first time in August 1948.

PROGRESS IN ROUNDING OUT FEDERAL OWNERSHIP

On June 30, 1949, 98 percent of the \$200,000 appropriated for the fiscal year 1948 for land acquisition was obligated; of the \$200,000 appropriated for 1949, about 70 percent was obligated, and practically all the remainder earmarked for specific purchases. Though these appropriations permit the Service only to nibble at the task of consolidating Federal ownership within the National Park System, more solid progress has been made during the past year than was made in the preceding decade.

One of the most significant acquisitions of the past year was the purchase of Surrender Field, the site on which Cornwallis' troops surrendered to the forces under Washington in 1781, for addition to the Yorktown portion of Colonial National Historical Park.

Forestalling its development for residential purposes, approximately 67 acres of land south of the Eternal-Light Peace Memorial, Gettysburg National Military Park, was purchased. The tract was the scene of an important part of the first day's fighting and of the virtual annihilation of Iverson's Confederate brigade.

In certain situations, progress in land acquisition can be, and frequently has been, accomplished through donation, transfer, and exchange. More than 25,000 acres have been obtained during the year by these methods. More than 20,000 acres of this were acquired for Joshua Tree National Monument. Such exchanges are time-consuming and difficult, but highly important and, where feasible, offer a great opportunity for the reduction of inholdings, particularly in a few western areas. Exchanges now pending involve approximately 50,000 acres.

The bulk of the acquisition problem, both in point of acreage and in point of value of land involved, can be solved only through purchase. Again the Congress is giving consideration to legislation that would recognize the problem as a whole and would authorize substantially larger sums annually over a period of years to be expended on land purchases.

Two large purchases made in Everglades.—Much of the preliminary work of the Everglades land acquisition program is now done, but its ultimate success hinges largely upon the passage of legislation now pending before Congress. This, if enacted, will remove all doubts as to the authority of the Service to acquire privately owned lands by condemnation with the \$2,000,000 donated by the State of Florida. Until that authority is assured, progress will continue to be impeded or blocked by landowners unwilling to sell, or willing to dispose of their properties only at excessively high prices.

In acreage acquired through purchase, the year saw great progress. Two purchases from the Model Land Co., aggregating 210,000 acres to which the company had record title, and costing \$298,000, were consummated. In order to make these purchases at such a price, however, it was necessary to allow exploration for oil for a period of years, and to permit its recovery, if discovered within that period, until such time as the yield is no longer sufficient to be profitable.

Private lands still unacquired amount to less than half of the lands within the boundaries agreed upon in 1944 which were privately owned when the park was established 2 years ago. They are in many small parcels; the prices which will have to be paid for a number of them will undoubtedly be somewhat higher than those for which the lands already obtained have been purchased.

Leon M. Gray, a distinguished engineer, who, for several years before the war, was the head of Region One's engineering division, and who

was placed in charge of the Everglades acquisition program when it was initiated, died in January, after an illness of several months. He was succeeded by Albert B. Manly, who formerly headed the Valuation Section of the Interstate Commerce Commission. Mr. Manly had previously been employed on Mr. Gray's staff as an appraiser.

Independence National Historical Park Project ready for launching.—Public Law 795 of the Eightieth Congress, passed a year ago, authorized the establishment of Independence National Historical Park in Philadelphia and authorized the appropriation of \$4,435,000 for the purchase of the required property. An item of \$500,000 for this purpose was included in the Interior Appropriation Act passed by the House of Representatives, but not yet acted on by the Senate.

In June Secretary Krug announced the names of the 11 Philadelphians whom he had appointed to serve as members of the Independence National Historical Park Advisory Commission, under authority granted by the 1948 act. These included Judge Edwin O. Lewis, who was chairman of the Philadelphia National Shrines Park Commission; A. G. B. Steel, banker and civic leader; and Arthur C. Kauffman, executive vice president of Gimbel Brothers—all nominated by Gov. James H. Duff of Pennsylvania; three persons nominated by Mayor Bernard R. Samuel of Philadelphia—Thomas Buckley, director of the Department of Public Works; Edward Hopkinson, Jr., chairman of the City Planning Commission; and Albert M. Greenfield, who had served as vice chairman of the Philadelphia National Shrines Park Commission. John P. Hallahan and Sydney E. Martin were recommended by the Carpenters' Company and the Independence Hall Association, respectively. United States Senator Francis J. Myers, who had also been a member of the other commission; Joseph Silk Clark, Jr., a director of the Citizens' Council on City Planning; and Michael E. Bradley, collector of customs, complete the roster.

The Service will proceed as rapidly as possible with the establishment of the necessary staff for the task ahead.

Proposals for new areas.—Of the 29 areas proposed during the past year for inclusion in the National Park System, only 4 were considered of enough importance to justify even preliminary field investigation.

Two areas suggested because of historic interest were scheduled for investigation, and for consideration by the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments. At the suggestion of the Department, preliminary data were assembled for consideration as to the desirability of national park or monument status for Shishaldin or some other active volcano in the Aleutians.

Progress on authorized projects.—The State of Tennessee has presented for review a deed to approximately 2,200 acres of land to be transferred to the United States for inclusion in the Cumberland Gap

National Historical Park project. A deed to approximately 5,300 acres is virtually ready to be presented by the State of Kentucky. The 1950 fiscal year will probably see Virginia ready to present a deed for its portion, approximately 7,500 acres.

In June just past, a deed for 24 acres of land near Bradenton, Fla., donated as the site of the DeSoto National Memorial, was accepted. At the year's end, establishment of the memorial awaited only the required publication of notice in the Federal Register.

The Castle Clinton National Monument project at the Battery, in New York City, took a step forward when Governor Dewey, on April 28, approved a State act authorizing the city of New York to transfer the property to the United States. The transfer, contingent upon the appropriation of Federal funds for repair and development, must be made before July 1, 1950.

Approximately 54 acres of land, with seven buildings, were acquired from War Assets Administration for the Fort Vancouver National Monument in the State of Washington.

Deficiencies in the title to 1,000 acres to be conveyed by the State of Iowa for the Effigy Mounds National Monument are being cured by the State. It is expected that the monument will be established soon.

The award of \$78,895 in a condemnation suit brought by the United States to acquire the 210 acres needed for the George Washington Carver National Monument, near Joplin, Mo., exceeded the amount authorized and appropriated for the purpose by \$48,895. Additional authorization and appropriation within the "reasonable time" granted by the court will be required if this project is to be established.

There was a revival of interest in the Cape Hatteras National Seashore Recreational Area project, on which the State of North Carolina had postponed action for several years in order to permit exploration of the area for oil. Representatives of the Service met with a local group at Manteo in June to explain the scope of the project and to dispel certain misunderstandings regarding it which had arisen during the past few years.

St. Croix Monument authorized.—In June, the President approved an act which authorized the establishment of St. Croix Island National Monument, in eastern Maine. The act authorized acceptance of private lands on the island, site of the first French settlement in the New World, and the acquisition of not more than 50 acres on the mainland opposite the island to provide a satisfactory approach to the St. Croix River and an administrative site.

Service activity in disposal of surplus realty.—Public Law 616, approved in June 1948, places on the National Park Service the responsibility of reviewing all applications from States and local governments for the transfer of surplus land holdings for public park,

recreational area, and historic monument purposes. During the year, 31 applications, involving as many separate installations, which had cost the Federal Government more than \$6,000,000, were referred to the Service for study and recommendation.

Of 24 of these, affecting about 23,500 acres of land and various improvements, and envisioning public park and recreational use, 17 were approved by the War Assets Administration, as recommended by the Service. More than \$620,000, representing 50 percent of the fair value, has been paid for them.

Five of the areas were requested solely for historic monument purposes. Fort McDowell (Angel Island) in San Francisco Bay, containing 641 acres, with 235 buildings, and valued at approximately \$730,000, is the largest of these. Transfers for historic monument use are made without cost.

The harbor defenses (Fort Moultrie) of Charleston, S. C., turned over to the State Board of Forestry, was one of two areas requested for a combination of park and monument purposes.

The Federal Property and Administrative Service Act of 1949, which established the General Services Administration, provides for the disposal of surplus realty for parks, recreation areas and historic monuments as a permanent function. It is expected that the National Park Service will continue to participate in the surplus property disposal program in cooperation with the General Services Administration.

PERSONNEL SITUATION IMPROVES

The years immediately following the war were marked by many necessary shifts of employees. During the past year, however, there have been no changes in assignments to major administrative or professional positions.

Important from the long-range administrative standpoint was the completion of the conversion of park ranger positions from custodial to administrative grades. The new classification reflects the duties of the positions more accurately, raises the top ranger grade to CAF-11, and recognizes the logical avenue of advancement for park rangers in the career system.

Approximately 100 park rangers have only temporary indefinite appointments. Many of the incumbents of these positions have been on the rolls for more than 3 years; recruitment is difficult for positions offering uncertain tenure. It is a pleasure, therefore, to record that the Civil Service Commission announced a park ranger examination, scheduled for mid-August, offering the definite prospect of establishment of a register from which these positions may be filled on a permanent basis.

In general, hiring experience has improved and the percentage of vacancies in permanent positions is lower than it has been at any time since 1941. However, funds have been insufficient to provide a satisfactory number of professional positions in the entrance, or trainee, grades to insure continuity of staff for the future. Since this situation was acute during the war, there is a gap of nearly 8 years in career progression which is already beginning to handicap the Service in filling positions by promotion from within the organization.

Appropriations for 1949 were sufficient to permit small increases in field staff. Total increases above the wartime staffs have been far less proportionately, however, than the increase in the volume of work which they are called upon to perform.

MISSION TO JAPAN

At the request of the Secretary of the Army, Charles A. Richey, Assistant Chief of Land and Recreational Planning, spent about 3½ months (April 28 to August 11, 1948) in Japan, to undertake a study of the Japanese national park system and the laws which govern it, for the purpose of formulating recommendations for preservation and for organization of the development and administration of the parks "along centralized lines for the public benefit."

During his stay in Japan, working in conjunction with the Civil Information and Education Section, SCAP, Mr. Richey visited 12 of the 13 existing national parks and a number of proposed national park areas. He conferred with all agencies of the occupation forces and of the Japanese central and local governments in any way concerned with the legal, developmental, and administration problems of the park system, and with a large number of civic groups. He reported a tremendous interest among the Japanese people and a great eagerness to learn how to protect their parks and how to manage them most effectively in the interest of the public.

Though admittedly not complete or exhaustive because of the limited time which could be spent in Japan, Mr. Richey's report, submitted to the Civil Information and Education Section, offers a careful analysis of existing conditions and a series of specific recommendations. These covered such matters as the urgent need of assistance to Japan in planning park and recreational facilities, desirable amendments and supplements to existing national park law to provide greater protection, extension of the existing system to include a few more of the outstanding samples of Japanese scenery, the curbing of practices which are destroying some of the natural qualities of the parks, the protection of historic sites, the training of planning personnel, the establishment of both a central administrative organization

and a field organization, bureau status for the park administration, parkways, destructive land-use practices, and a variety of other matters.

The National Park Service is gratified that its cooperation was sought in so important an undertaking and proud to have been able to provide the services of so competent a consultant.

LAKE TEXOMA RETURNED TO ENGINEERS

On June 30, 1949, administration of the Lake Texoma Recreational Area, in Texas and Oklahoma, was assumed by the Corps of Engineers of the Department of the Army, which had constructed the Denison Dam on the Red River, thus creating the lake. Termination of the arrangement, under which the National Park Service took over responsibility for the development and management of the lake and the lands surrounding it for recreational use in 1946, was requested by the Department of the Interior. Throughout the period of the Service's responsibility, administration was made difficult by the unsatisfactory division of authority between the Service and the Corps; there was, in addition, considerable local dissatisfaction occasioned by the slow rate of development under Service administration, because of inadequate appropriations, heightened by the belief that the corps would spend much more on developments.

Providing a great variety of water recreation in a part of the country in which opportunities of the sort were previously nonexistent, Lake Texoma quickly attained a volume of public use considerably surpassing that of any other area administered by the Service. From approximately 400,000 visitors during the first year of the Service's administration, the number jumped in 2 years to nearly 2,500,000. During the 9 months of the 1949 travel year that it remained under Service control, the visitor total exceeded 1,900,000.

1949 ERUPTION OF MAUNA LOA

After 6 years and 8 months of quiescence, Mauna Loa, in Hawaii National Park, resumed eruptive activity on January 6. The first phase, January 6-8, consisted of the initial rupture and early fountaining along a 3-mile rift, producing a great flow of pumice-crustured lava. The second, or cone-building phase, lasting nearly a month, included the partial sealing of the rift and the restricting of fountaining to two vents. The larger of the fountains played to heights of 600 to 800 feet, producing an exceptionally large complete cinder and pumice cone. During this phase there were vigorous flows. The third, or lava-cone phase, which began February 6, was still active at the year's

end, and may continue for an indefinite time, with the possibility of weak or moderate flows from time to time.

Members of the park staff have thoroughly covered all phases of the eruption, both on the ground and from the air. Excellent color motion pictures were obtained and edited for use in the interpretive program. Research in the study of radiation and heat problems occurring during the various phases of the eruption has been carried on by the park staff and the Geological Survey. Though few park visitors could make the trip to the summit, many of them flew over it at various times. Two flows coursing down the side of the mountain afforded an excellent opportunity to observe that phase of the eruption from a distance.

THE ADVISORY BOARD

The Advisory Board on National Parks, Historic Sites, Buildings, and Monuments, under the chairmanship of Dr. Waldo G. Leland, spent February 8-10 in Washington in a review of National Park Service plans and activities. In addition, the Board determined upon the establishment of six committees—on biological problems, on historical problems, on recreational problems, on educational problems, on liaison, and on review.

Through this group, the National Park Service has available the knowledge and judgment and experience of experts in a number of special fields, furnished freely and with a fine spirit of public service. Their deep interest in national park affairs is combined with an objectivity which those who deal daily with the problems affecting the National Park System can scarcely expect to maintain. Their contributions, as individuals and as a group, are of very great value to the Service.

AIRPORTS AND THE PARKS

The increasingly close relationship between the National Park Service and the Civil Aeronautics Administration is shown by Service cooperation with the Administration in preparing its annually revised national airport plan, looking toward the provision of airports, as the need develops, reasonably close to the entrances of the major national parks and monuments but outside their boundaries. Legislation which would authorize the Department to sponsor or co-sponsor such developments has been introduced in the present Congress.

Membership on the Interior-Commerce Departmental Airport Committee was extended to the Department of Agriculture. The group was redesignated as the Interior-Commerce-Agriculture Airport Committee, on which both the National Park Service and the Forest Service are represented.

The National Park Service has still been unable to reach a solution of the problem of control of flights over the park and monuments, in the interest of safety and of keeping to a minimum the disturbance caused by noise; but the matter is still being studied.

MOUNTAIN CLIMBING IN THE PARKS

Many areas of the National Park System provide a strong lure to the mountain climber, with Rocky Mountain National Park probably the most popular in this respect. For Longs Peak alone, more than 1,800 ascents were recorded. The Teton Mountains, Grand Teton National Park, were the climbing objective of 245 organized parties. A party of 6 attempted to climb Mount McKinley, but only 3 reached the top.

No changes were made in the climbing regulations during the year, since the desires of qualified climbers and mountaineering organizations generally appear to be satisfied under those now in effect. A few experienced climbers continue to advocate the rescinding of all regulations which require climbers to obtain permits from the superintendent or which permit him to prohibit climbs. However, in no case during 1948 was a climb prohibited; on the other hand, several parties, at the time of registration for a climb, altered their plans after listening to the advice of expert climbers on the park staffs.

A number of accidents resulted from failure to observe the regulations and refusal to heed the warnings of Service officers. Temporary lapses from safety precautions were the principal causes of accidents and fatalities. There were five deaths from mountaineering accidents. Three of the victims were visitors, one a Park Service employee off duty, and one a concession employee, also off duty.

To train key men in mountain-rescue work, who could in turn instruct other employees, was the major objective of the first mountain-climbing and rescue training school for Service employees, held at Mount Rainier National Park September 13-17, and attended by representatives of 11 parks and monuments.

NAMES OF GEOGRAPHIC FEATURES APPROVED

The Board on Geographic Names has approved the naming of two peaks in Big Bend National Park in honor of Roger W. Toll and George S. Wright, who were killed in an automobile accident while returning from an official visit to the prospective park in 1936. Also honored by having a peak in Rocky Mountain National Park named for him was Joe Mills, who was active in promoting the establishment of the park. Other decisions of the Board included Oastler Castle, a formation in Bryce Canyon National Park, named for the late Dr.

Frank R. Oastler, one of the originators of the interpretive program of the National Park Service and a member of the advisory Board; Mount Conard and Conard Meadows, Lassen Volcanic National Park, named for Arthur L. Conard, who was active in the establishment and development of that park; Carson Mountain, Shenandoah National Park, named for William E. Carson who, as chairman of the Virginia Conservation and Development Commission, spearheaded the work involved in acquiring lands for Shenandoah; and extensive lists of names of features in Glacier Bay National Monument, Alaska, and the Lake Mead National Recreational Area in Arizona and Nevada.

LIVESTOCK GRAZING

When Jackson Hole National Monument was established in 1943, some of the strongest opposition came from the stockmen who had been using range within the area, and who feared that their grazing privileges would be curtailed or abolished. However, in accordance with the policy immediately announced by Secretary Ickes, established privileges have been determined and recognized, and have been definitely attached to the base lands on which they had been established. All grazing on monument lands is now under term permit and on a routine basis.

The problem of trespass stock continues to be disturbing in a number of areas, particularly where overgrazing results. Its satisfactory solution can be reached only through an extensive fencing program. In some instances the impounding of trespass stock has had a deterrent effect, especially where the trespass has been deliberate.

In several areas the impact of grazing by pack and saddle animals on mountain meadows has become a serious problem. A special study of the problem was made in Yosemite National Park during the past year.

In four areas in the southwest, the year brought a permanent annual reduction of 3,961 animal-use months of livestock grazing.

FIELD NOTES

Service participation in storm relief.—Yellowstone, Rocky Mountain, and Zion National Parks all contributed snow-removal machinery and operating personnel for use in opening snow-blocked roads, under the general direction of the Bureau of Land Management, during the heavy storms of February and March. Glacier and Grand Teton National Parks, Lake Mead Recreational Area, Theodore Roosevelt National Memorial Park, and Arches and Death Valley National Monuments also participated in "Operation Snowbound." Because

of distress conditions in the vicinity of Zion, that park made a notable contribution to relieving the situation there before the Bureau took over direction of the work. Also, during late December and early January, roads in northeastern Colorado were blocked so badly that the State highway department was unable to cope with the situation and personnel and equipment from Rocky Mountain National Park were called on for help, which was effectively rendered. High and deserved praise was expressed for the efficiency of the work carried out by National Park Service crews and for their untiring efforts in the emergency.

The unprecedented cold and snow in the higher altitudes of Death Valley National Monument required a long period of snow removal on main roads in that area. Monument personnel made rescues of 12 persons marooned at mines in the mountains and undoubtedly prevented loss of life.

Crater Lake freezes over.—Widespread interest was aroused last February by the fact that Crater Lake, for the first time in recorded history, was solidly frozen over, to depths ranging from 2 to 12 inches, and snow-covered. For more than 2 months, visitors to the park, many of whom were attracted there by this unusual occurrence, beheld an expanse of white in place of the sapphire waters so justly famous.

Service conference at Grand Canyon.—About 150 employees attended the National Park Service conference, held at Grand Canyon October 4-8, 1948. Devoted to intensive and lively discussion of all phases of the Service's work, the meeting was highlighted by Secretary Krug's address and by the ceremony in which the Secretary conferred the Department's distinguished service medal on Assistant Chief Ranger "Bill" Butler of Mount Rainier National Park, for his courageous and successful search for the Marine plane which crashed on the upper South Tahoma Glacier on December 10, 1947.

Two discoveries.—A collection of bones discovered in undisturbed condition under a large accumulation of cave stoneflow in a remote section of Carlsbad Caverns were identified by Dr. J. L. Gazin of the National Museum as those of the ground sloth *Nototherium*. Exploration prompted by persistent reports of dinosaur tracks in a wide section of Zion National Park resulted in the finding of 45 to 50 good identifiable tracks on large slabs of rock.

Membership on departmental field committees.—Both the Region Three office in Santa Fe and the Region Four office in San Francisco are represented on Interior Department field committees, to which the regional directors are called upon to devote considerable time. Perhaps the most active of these committees is that for the Pacific Northwest though the work of the Alaska field committee is assuming increasing importance. The comprehensive reports of the Pacific

Northwest committee have required a great deal of research and study by many Service personnel.

Travel volume again sets record.—For the third successive year, travel to the areas administered by the National Park Service set a new record during the travel year ending September 30, 1948. The total was 29,608,318. For the fiscal year 1949, visitors totaled 31,355,951, against 27,881,015 for the 1948 fiscal year.

Yellowstone and Rocky Mountain National Parks each had more than a million visitors for the first time in their history.

Yosemite motion picture.—Last spring the Atwater Kent Foundation gave the original and one copy of the sound-and-color motion picture of Yosemite National Park, taken by Mr. Ted Phillips, to the National Park Service. Arrangement are under way to reproduce and market this film in somewhat shortened and revised form, to bring this fine presentation of a great park to a large audience.

Information relating to the National Park System June 30, 1949

	State	Federal land	Approximate visitors July 1, 1947-June 30, 1948	Approximate visitors July 1, 1948-June 30, 1949
<i>National parks</i>		<i>Acres</i>		
Acadia.....	Maine.....	28,309.68	438,644	474,885
Big Bend.....	Texas.....	691,978.95	35,098	48,869
Bryce Canyon.....	Utah.....	36,010.38	166,136	179,406
Carlsbad Caverns.....	New Mexico.....	45,526.59	422,226	428,299
Crater Lake.....	Oregon.....	160,290.33	359,314	318,752
Everglades.....	Florida.....	341,969.00	(1)	70,836
Glacier.....	Montana.....	997,695.04	331,813	312,798
Grand Canyon.....	Arizona.....	645,295.91	620,875	588,189
Grand Teton.....	Wyoming.....	94,892.92	145,040	154,521
Great Smoky Mountains.....	Tennessee-North Carolina.....	461,003.79	1,277,846	1,467,113
Hawaii.....	Territory of Hawaii.....	173,404.60	409,331	393,580
Hot Springs.....	Arkansas.....	1,019.13	305,299	309,859
Isle Royale.....	Michigan.....	133,838.51	7,961	9,152
Kings Canyon.....	California.....	452,824.82	239,262	292,298
Lassen Volcanic.....	do.....	103,429.28	147,458	164,768
Mammoth Cave.....	Kentucky.....	50,695.73	190,059	191,808
Mesa Verde.....	Colorado.....	51,017.87	54,855	62,787
Mount McKinley.....	Alaska.....	1,939,319.04	4,477	4,659
Mount Rainier.....	Washington.....	241,524.77	860,335	551,249
Olympic.....	do.....	846,765.66	188,183	255,928
Platt.....	Oklahoma.....	911.97	740,580	783,856
Rocky Mountain.....	Colorado.....	252,788.28	954,779	1,014,134
Sequoia.....	California.....	385,100.13	354,481	394,248
Shenandoah.....	Virginia.....	193,472.98	887,646	1,006,766
Wind Cave.....	South Dakota.....	26,576.15	103,467	112,793
Yellowstone.....	Idaho-Montana-Wyoming.....	2,213,206.55	941,578	1,044,796
Yosemite.....	California.....	756,440.62	735,120	773,177
Zion.....	Utah.....	94,241.06	285,728	306,366
Total.....		11,419,549.74	11,207,591	11,715,892
<i>National historical parks</i>				
Abraham Lincoln.....	Kentucky.....	116.50	68,742	80,375
Chalmette.....	Louisiana.....	33.25	51,933	49,759
Colonial.....	Virginia.....	7,129.00	691,744	896,954
Morristown.....	New Jersey.....	958.37	313,365	337,065
Saratoga.....	New York.....	2,087.59	54,350	67,328
Total.....		10,324.71	1,180,134	1,431,481

See footnotes at end of table.

Information relating to the National Park System June 30, 1949—Continued

	State	Federal land	Approximate visitors July 1, 1947-June 30, 1948	Approximate visitors July 1, 1948-June 30, 1949
<i>National military parks</i>				
		<i>Acres</i>		
Chickamauga and Chattanooga	Georgia-Tennessee	8, 127. 16	271, 526	245, 236
Fort Donelson	Tennessee	102. 54	32, 724	28, 028
Fredericksburg and Spotsylvania	Virginia	2, 420. 71	107, 043	124, 444
Gettysburg	Pennsylvania	2, 534. 11	657, 050	658, 908
Guilford Courthouse	North Carolina	148. 83	36, 190	35, 970
Kings Mountain	South Carolina	4, 012. 00	32, 813	34, 042
Moore's Creek	North Carolina	30. 00	4, 202	5, 811
Petersburg	Virginia	1, 324. 62	138, 383	165, 301
Shiloh	Tennessee	3, 729. 26	275, 276	304, 208
Stones River	do	323. 86	5, 475	5, 550
Vicksburg	Mississippi	1, 323. 56	33, 299	33, 942
Total		24, 076. 65	1, 593, 981	1, 641, 440
<i>National battlefield parks</i>				
Kennesaw Mountain	Georgia	3, 094. 21	41, 362	45, 983
Richmond	Virginia	684. 44	26, 100	38, 154
Total		3, 778. 65	67, 462	84, 137
<i>National memorial parks</i>				
Theodore Roosevelt	North Dakota	58, 341. 26	2 4, 563	63, 470
<i>National monuments</i>				
Ackia Battleground	Mississippi	49. 15	(1)	(1)
Andrew Johnson	Tennessee	17. 08	24, 496	22, 194
Appomattox Court House	Virginia	968. 25	25, 600	29, 350
Arches	Utah	33, 929. 94	6, 807	11, 335
Aztec Ruins	New Mexico	27. 14	13, 886	14, 932
Badlands	South Dakota	122, 972. 46	345, 712	392, 476
Bandelier	New Mexico	27, 048. 89	26, 710	30, 414
Big Hole Battlefield	Montana	200. 00	2, 685	3, 133
Black Canyon of the Gunnison	Colorado	13, 176. 02	23, 710	25, 167
Cabrillo	California	0. 50	382, 447	444, 637
Canyon de Chelly	Arizona	83, 840. 00	2, 021	2, 460
Capitol Reef	Utah	33, 068. 74	(1)	(1)
Capulin Mountain	New Mexico	680. 42	30, 600	32, 100
Casa Grande	Arizona	472. 50	36, 837	30, 752
Castillo de San Marcos	Florida	18. 51	266, 169	312, 880
Castle Pinckney	South Carolina	3. 50	(1)	(1)
Cedar Breaks	Utah	6, 172. 20	29, 228	34, 948
Chaco Canyon	New Mexico	18, 039. 39	1, 107	1, 303
Channel Islands	California	* 26, 819. 26	(1)	(1)
Chiricahua	Arizona	10, 529. 80	13, 916	15, 274
Colorado	Colorado	18, 120. 55	58, 596	65, 959
Craters of the Moon	Idaho	47, 210. 67	28, 007	33, 452
Custer Battlefield	Montana	765. 34	60, 237	74, 264
Death Valley	California-Nevada	1, 850, 565. 20	161, 359	156, 153
Devil Postpile	California	798. 46	(1)	(1)
Devils Tower	Wyoming	1, 193. 91	41, 214	53, 391
Dinosaur	Colorado-Utah	190, 798. 49	10, 222	11, 783
El Morro	New Mexico	240. 00	1, 672	2, 690
Father Millet Cross	New York	. 01	(1)	(1)
Fort Frederica	Georgia	74. 53	47, 722	54, 759
Fort Jefferson	Florida	* 47, 125. 00	7, 053	7, 111
Fort Laramie	Wyoming	214. 41	12, 159	15, 295
Fort Matanzas	Florida	227. 76	13, 211	15, 665
Fort McHenry	Maryland	47. 64	458, 416	527, 147
Fort Pulaski	Georgia	5, 427. 39	35, 074	37, 459
Fort Sumter	South Carolina	2. 40	(1)	(1)
Fossil Cycad	South Dakota	320. 00	(1)	(1)
George Washington Birthplace	Virginia	393. 68	40, 000	43, 882
Gila Cliff Dwellings	New Mexico	160. 00	(1)	(1)
Glacier Bay	Alaska	2, 297, 597. 73	(1)	(1)
Grand Canyon	Arizona	196, 051. 00	137	168
Gran Quivira	New Mexico	450. 94	2, 266	2, 501
Great Sand Dunes	Colorado	35, 908. 19	15, 989	18, 665
Holy Cross	do	1, 392. 00	(1)	(1)
Homestead	Nebraska	162. 73	2, 731	2, 411

See footnotes at end of table.

Information relating to the National Park System June 30, 1949—Continued

	State	Federal land	Approximate visitors July 1, 1947-June 30, 1948	Approximate visitors July 1, 1948-June 30, 1949
<i>National monuments—Con.</i>		<i>Acres</i>		
Hovenweep.....	Utah-Colorado.....	299.34	156	198
Jackson Hole.....	Wyoming.....	173,064.62	(1)	(1)
Jewel Cave.....	South Dakota.....	1,274.56	15,276	8,675
Joshua Tree.....	California.....	687,031.60	60,671	63,580
Katmai.....	Alaska.....	2,697,590.00	(1)	(1)
Lava Beds.....	California.....	46,027.56	33,768	35,506
Lehman Caves.....	Nevada.....	640.00	5,297	6,447
Meriwether Lewis.....	Tennessee.....	300.00	13,229	15,411
Montezuma Castle.....	Arizona.....	783.09	25,495	28,181
Mound City Group.....	Ohio.....	57.00	34,299	39,862
Muir Woods.....	California.....	424.56	282,469	269,793
Natural Bridges.....	Utah.....	2,649.70	1,190	1,154
Navajo.....	Arizona.....	360.00	405	661
Ocmulgee.....	Georgia.....	683.48	27,469	31,624
Old Kasaan.....	Alaska.....	38.00	(1)	(1)
Oregon Caves.....	Oregon.....	480.00	80,938	74,054
Organ Pipe Cactus.....	Arizona.....	328,161.73	94,449	121,615
Perry's Victory.....	Ohio.....	14.25	41,253	85,606
Petrified Forest.....	Arizona.....	85,303.63	340,098	332,033
Pinnacles.....	California.....	12,817.77	19,638	21,772
Pipe Spring.....	Arizona.....	40.00	743	1,057
Pipestone.....	Minnesota.....	115.60	5,143	21,435
Rainbow Bridge.....	Utah.....	160.00	(1)	(1)
Saguaro.....	Arizona.....	53,669.24	19,867	21,592
Scotts Bluff.....	Nebraska.....	2,196.44	45,884	52,050
Shoshone Cavern.....	Wyoming.....	212.37	(5)	(5)
Sitka.....	Alaska.....	57.00	6,735	6,584
Statute of Liberty.....	New York.....	10.38	537,171	555,961
Sunset Crater.....	Arizona.....	3,040.00	20,699	26,371
Timpanogos Cave.....	Utah.....	250.00	54,492	59,598
Tonto.....	Arizona.....	1,120.00	15,761	16,517
Tumacacori.....	do.....	10.00	26,425	24,904
Tuzigoot.....	do.....	42.67	16,900	17,010
Verendrye.....	North Dakota.....	253.04	(1)	(1)
Walnut Canyon.....	Arizona.....	1,641.62	20,613	21,296
Wheeler.....	Colorado.....	300.00	(1)	(1)
White Sands.....	New Mexico.....	140,247.04	106,134	138,653
Whitman.....	Washington.....	45.84	(1)	7,262
Wupatki.....	Arizona.....	34,853.03	4,999	5,710
Yucca House.....	Colorado.....	9.60	93	32
Zion.....	Utah.....	33,920.75	(1)	(1)
Total.....		9,383,477.29	4,185,655	4,638,314
<i>National battlefield sites</i>				
Antietam.....	Maryland.....	183.33	32,205	32,653
Brices Crossroads.....	Mississippi.....	1.00	(1)	(1)
Cowpens.....	South Carolina.....	1.00	1,419	1,910
Fort Necessity.....	Pennsylvania.....	2.00	80,096	89,399
Tupelo.....	Mississippi.....	1.00	(1)	(1)
White Plains.....	New York.....	00	(1)	(1)
Total.....		188.33	113,720	123,962
<i>National historic sites</i>				
Adams Mansion.....	Massachusetts.....	4.05	1,614	6,739
Atlanta Campaign Markers.....	Georgia.....	20.96	(1)	(1)
Federal Hall Memorial.....	New York.....	0.49	76,656	77,381
Fort Raleigh.....	North Carolina.....	16.45	103,846	105,407
Hampton.....	Maryland.....	43.30	(1)	(1)
Home of Franklin D. Roosevelt.....	New York.....	33.23	473,724	454,564
Hopewell Village.....	Pennsylvania.....	848.06	73,249	81,373
Jefferson National Expansion Memorial.....	Missouri.....	82.58	28,055	24,555
Manassas Battlefield Park.....	Virginia.....	1,604.57	9,332	19,838
Old Philadelphia Custom House.....	Pennsylvania.....	0.79	26,100	26,165
Salem Maritime.....	Massachusetts.....	8.61	15,916	21,184
Vanderbilt Mansion.....	New York.....	211.65	61,256	73,022
Total.....		2,874.74	869,748	890,228
San Juan.....	Puerto Rico.....	0 40.00		(1)

See footnotes at end of table.

Information relating to the National Park System June 30, 1949—Continued

	State	Federal land	Approximate visitors July 1, 1947-June 30, 1948	Approximate visitors July 1, 1948-June 30, 1949
<i>National memorials</i>				
		<i>Acres</i>		
House Where Lincoln Died.....	District of Columbia.....	0. 05	55, 153	53, 254
Kill Devil Hill.....	North Carolina.....	314. 40	80, 784	75, 663
Lee Mansion.....	Virginia.....	2. 71	311, 573	330, 745
Lincoln Memorial.....	District of Columbia.....	. 61	1, 511, 390	1, 605, 645
Lincoln Museum.....	do.....	. 18	102, 100	105, 267
Mount Rushmore.....	South Dakota.....	1, 668. 27	445, 174	628, 845
New Echota Marker.....	Georgia.....	. 92	(¹)	(¹)
Thomas Jefferson.....	District of Columbia.....	1. 20	560, 896	544, 081
Washington Monument.....	do.....	. 37	799, 548	851, 272
Total.....		1, 988. 71	3, 866, 618	4, 194, 772
<i>National cemeteries</i>				
Antietam.....	Maryland.....	11. 36	(²)	(²)
Battleground.....	District of Columbia.....	1. 03	2, 700	2, 700
Fort Donelson.....	Tennessee.....	15. 34	(²)	(²)
Fredericksburg.....	Virginia.....	12. 00	(²)	(²)
Gettysburg.....	Pennsylvania.....	15. 55	(²)	(²)
Poplar Grove.....	Virginia.....	8. 72	(²)	(²)
Shiloh.....	Tennessee.....	10. 25	(²)	(²)
Stones River.....	do.....	20. 09	(²)	(²)
Vicksburg.....	Mississippi.....	119. 76	(²)	(²)
Yorktown.....	Virginia.....	2. 91	(²)	(²)
Total.....		217. 01	2, 700	2, 700
<i>National parkways</i>				
Blue Ridge.....	North Carolina-Virginia.....	44, 822. 61	1, 371, 481	1, 507, 036
George Washington Memorial.....	Virginia-Maryland.....	2, 912. 67	(³)	(³)
Natchez Trace.....	Tennessee-Alabama-Mississippi.....	13, 648. 87	(³)	(³)
Total.....		61, 384. 15	1, 371, 481	1, 507, 036
<i>National capital parks</i>				
National Capital Parks.....	Maryland-Virginia-District of Columbia.....	29, 046. 52	(⁴)	(⁴)
Grand total National Park System.....		20, 995, 247. 76	24, 463, 653	26, 293, 432

¹ No travel figures available or maintained.² Travel shown from May through June 1948 only.³ Area encompassed by map included with and made a part of Presidential proclamation extending monument boundaries is approximately 26,819.26 acres.⁴ Area encompassed on map included with and made a part of Presidential proclamation establishing monument. Land area only is 86.82 acres.⁵ Closed to public.⁶ Acreage approximate only. Area not included in historic site figures nor National Park System total acreage since it is administered by agreement with the Department of the Army, which has basic jurisdiction.⁷ Included in travel figures of adjacent battlefield sites, military or historical parks, or memorials.⁸ Travel reported only for national memorials under National Capital Parks administration; shown under national memorials.

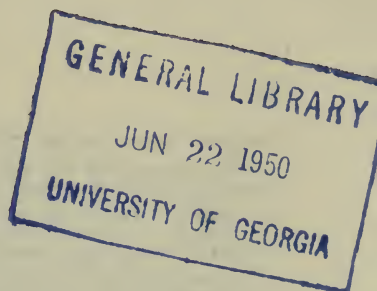
Information relating to projects and areas under the jurisdiction of the National Park Service but not within the National Park System, June 30, 1949

	State	Federal land acres	Approximate visitors July 1, 1947-June 30, 1948	Approximate visitors July 1, 1948-June 30, 1949
<i>National recreational areas</i>				
Coulee Dam.....	Washington.....	98, 500. 00	106, 270	269, 217
Lake Mead.....	Arizona-Nevada.....	1, 899, 728. 00	1, 576, 689	1, 507, 800
Millerton Lake.....	California.....	11, 605. 00	352, 280	389, 241
Lake Texoma.....	Texas-Oklahoma.....		1, 382, 123	2, 996, 261
Total.....		2, 009, 833. 00	3, 417, 362	5, 162, 519
<i>Recreational demonstration areas</i>				
Catoctin.....	Maryland.....	9, 918. 28	(¹)	(¹)
Custer.....	South Dakota.....	6, 083. 00	(¹)	(¹)
Total.....		16, 001. 28		
<i>National historic sites not federally owned</i>				
Gloria Dei.....	Pennsylvania.....	1. 20		(¹)
Independence Hall.....	do.....			
Jamestown.....	Virginia.....			
McLoughlin House.....	Oregon.....			
Saint Paul's Church.....	New York.....			
San Jose Mission.....	Texas.....			
Touro Synagogue.....	Rhode Island.....			
Total.....		1. 20		
<i>Projects ²</i>				
Independence National Historical Park.....	Pennsylvania.....	.63		
DeSoto National Memorial.....	Florida.....	24. 18		
Cape Hatteras National Seashore Recreational Area.....	North Carolina.....	82. 10		
Olympic Ocean Strip and Queets Corridor.....	Washington.....	44, 963. 00		
Total.....		45, 069. 91		
Grand total, National Park System; other areas under jurisdiction of National Park Service; San Juan National Historic Site, under basic jurisdiction of the Department of the Army; and projects.		23, 066, 193. 15	27, 881, 015	31, 455, 951

¹ No travel figures available or maintained.

² Includes only those in which lands are under National Park Service administration.

1949



INDEX

REPORT OF THE DIRECTOR OF THE NATIONAL PARK SERVICE, FISCAL YEAR 1949

- Aandahl, Gov. Fred G.—316.
 Acadia National Park: donation of Isleford Museum to—311; flood damages—306.
 Accidents, fatal, from mountain climbing—329.
 Accommodations, concessioner: capital for expansion of, unobtainable—299; expansion and rehabilitation—298; how expansion was accomplished—299.
 Advisory Board on National Parks, Historic Sites, Buildings, and Monuments—323, 328.
 Agriculture, Department of, added to Airport Committee—328.
 Aircraft, flight altitudes—329.
 Air Force, cooperation on forest fires—320.
 Airports—328.
 Alaska Field Committee—331.
 American University—314.
 Antelope, stocked at Big Bend—318.
 Antiquities Act, application to research—316.
 American Pioneer Trails Association, donation to Scotts Bluff National Monument Museum—310.
 Appomattox Court House National Historical Monument, restoration of McLean House—314.
 Archeology: methods applied to historical areas—315; under Antiquities Act permits—316.
 Arches National Monument, "Operation Snowbound"—330.
 Army, Department of: agreement on San Juan National Historic Site—314; agreement on eliminating Glacier View Dam project—294; interest in repair of San Juan forts—314.
 Atwater Kent Foundation—332.
 Avalon Foundation, contribution to Hampton National Historic Site—310.
 Bears, black, visitor familiarity with—318.
 Beetle, mountain pine, infestations—321.
 Big Bend National Park; additional antelope stocking—318: Toll and Wright Peaks named in—329.
 Bighorn sheep: at Mesa Verde—318; Sierra, in Sequoia and Kings Canyon National Parks—318.
 Blister rust: eradication program—321; extension south to Great Smoky Mountains National Park—321.
 Blue Ridge Parkway: completion of projects—305; FM radio system—303.
 Bryce Canyon National Park: concessions—301; needle miner infestation—321; Oastler Castle named in—329.
 Bureau of Land Management—330.
 Bureau of Public Roads—304, 305.
 Butler, "Bill"—331.
 Campfire programs—311.
 Cape Hatteras Lighthouse—307.
 Cape Hatteras National Seashore Recreational Area project—324.
 Carlsbad Caverns National Park: ground sloth bones discovered—331.
 Carson, William E., mountain named for—330.
 Castillo de San Marcos, repair and stabilization—314.
 Castle Clinton National Monument project—324.
 Catoclin Recreational Demonstration Area, flood damages—306.
 Centennial of Department of Interior, National Park Service participation in observance—296.
 Civil Information and Education Section, SCAP—326.
 Coast Guard, permit for use of old Hatteras Lighthouse—307.
 Colonial Dames of America, New York chapter, donation—310.
 Colonial National Historical Park; flood damage—306; Glass House Point archeology—315; Surrender Field acquired—321.
 Colonial Williamsburg, Inc.—315.
 Colorado River: effects of upstream development on Grand Canyon flow—294; Kaibab tunnel proposal eliminated—294.
 Communications, inadequacies: relation to forest fires—320; need of improvement for protection—320; progress in improving—303.
 Conard, Arthur L., name applied to peak and meadows—330.
 Concessions: added facilities—299; basic problem of—297; bids invited on 19 contracts—301; contract, new form offered—300; evolution of policy—297; Government ownership of facilities—297; general discussion—297 et seq.; labor regulations changed—302; Lassen National Park Co. contract extended—301; Loeffler contract—300; policy announced by Secretary Krug—297; problems of capital explained to House Committee—300; proposal to purchase Rainier National Park Co. assets—301; rate adjustments—300; rehabilitation of facilities—295; unaudited reports increase—300; unavailability of capital for expansion—299; Utah Parks Co. contract renewal—295.
 Concessions, Advisory Group—298.
 Conservation, soil and moisture—307.
 Crater Lake National Park, lake frozen over—331.
 Cumberland Gap National Historical Park project—323.
 Dall sheep, increase at Mount McKinley—318.
 Death Valley National Monument, "Operation Snowbound"—330, 331.
 Deer, control problem in Rocky Mountain and Zion—317.
 Department of Interior. *See* Interior, Department of.
 De Soto National Memorial, land donated for—295.
 Developments: estimates of cost of needed developments—302; general discussion—302 et seq.; improvements in communications—303; Statue of Liberty—302.

- Dinosaur tracks, in Zion National Park—331.
- District of Columbia Recreation Board—301.
- Donations: of De Soto Memorial lands—295; of funds for Hampton—310; of Jackson paintings—310; of museum exhibits—310.
- Education: as function of National Park Service—307 et seq.; campfire programs—311; essential elements of National Park Service program—308; guided trips—311; museums, place in program—309; numbers reached by program—309; self-operating interpretive devices—312; studies of National Park Service interpretive activities—312.
- Eikenschimmel, Otto, on Manassas museum—310.
- Elk: Jackson Hole herd—296; Rocky Mountains—317; Yellowstone—317.
- Engineers, Corps of: Mining City dam proposed—295; retransfer of Lake Texoma to—327.
- Entomology and Plant Quarantine, Bureau of—321.
- Equipment, amortization program—305.
- Everglades National Park: Florida Bay fish problems—319; FM radio installation—303; land acquisition—295, 322.
- Exchanges, land—322.
- Federal Property and Administration Services Act—325.
- Feral animals, in Hawaii National Park destroyed—319.
- Field Committees, Departmental—331.
- Fisher, in Sequoia and Kings Canyon—318.
- Fishery: management—319; problems—319.
- Fish plantings in system—319.
- Floods, damage to service areas—306.
- Florida Bay, need of fish protection—319.
- FM radio systems—303.
- Foothills Parkway, construction delayed—305.
- Ford Mansion: Colonial Dames donation of furniture—312; repair and rehabilitation—314.
- Forest fires: Air Force cooperation on—320; in 1948—319; increased costs of control—319; in Isle Royale, Yosemite, Kings Canyon—320; relation to inadequate communications—320.
- Forest protection, fire record, 1948—319.
- Forest Service, on Airport Committee—328.
- Fort Matanzas National Monument, stabilization and protection—314.
- Fort McDowell—325.
- Fort Moultrie—325.
- Fort Raleigh National Historic Site, archeological work at—315.
- Fort Vancouver National Monument project: excavations at—315; land conveyance—324.
- Freeman, Dr. D. S., on Manassas Museum—310.
- Gazin, Dr. J. L.—331.
- General Accounting Office, audit of Loeffler accounts—301.
- Geographic Names, Board of—329.
- George Washington Carver National Monument project—324.
- George Washington Memorial Parkway—306.
- Gettens, Dr. Rutherford G., advice on Tuma-cacori fresco preservation—314.
- Gettysburg National Military Park: land acquisition—322; treatment given cyclorama—311.
- Glacier Bay National Monument, features named in—330.
- Glacier National Park: budworm infestation—321; elk and deer problem—317; flood damages—306; Glacier Park Transport Co. concession—301; Glacier View Dam project eliminated—294; improved communications—303; "Operation Snowbound"—330; saved from disfigurement—294.
- Glacier Park Transport Co.—301.
- Glacier View Dam project—294.
- Glass House Point, archeological excavations of—315.
- Government Printing Office—313.
- Grand Canyon National Park: fire-control conference—320; flood damage to trails—306; Kaibab Tunnel project dropped—294; North Rim concession—301; National Park Service conference—295, 331; Yavapai Observation Station overtaxed—309.
- Grand Teton National Park: beetle control—321; grizzly bears—318; mountain climbing in—329; "Operation Snowbound"—330.
- Gran Quivira National Monument, self-guiding trail—312.
- Gray, Leon M.—322.
- Grazing of livestock—330.
- Greater North Dakota Association—316.
- Great Smoky Mountains National Park: blister rust infestation—321; Heintooga Road construction deferred—304.
- Ground sloth bones discovered in Carlsbad Caverns—331.
- Guilford Courthouse National Military Park: museum completion—295; self-operating interpretive devices—312.
- Hampton Bathhouse concession—301.
- Hampton National Historic Site: funds donated for repair and rehabilitation—310; progress of repair and rehabilitation—314.
- Hawaii National Park: feral animals destroyed—319; Nene sighted—319; new radio installations—303.
- Haynes, Inc., concession—301.
- Heintooga Road, Great Smoky Mountains National Park, construction deferred—304.
- Highways. *See* Road.
- Historical areas handbooks series launched—313.
- Historical conservation groups, importance of—315.
- Hoover Committee—295.
- Hot Springs National Park, concessions—301.
- Hui-o-Pele, funds donation for Hawaii National Park—310.
- Independence National Historical Park project; commission appointed—323; Perot Morris House—314.
- Independence National Historical Park Advisory Committee—323.
- Insects, protection from epidemics—321.
- Institute for the Preservation and Interpretation of Historic Sites and Buildings—315.
- Interior-Commerce-Agriculture Airport Committee—328.
- Interior, Department of: agreement with Army on San Juan National Historic Site—314; agreement with Army to drop Glacier View Dam project—294; award to "Bill" Butler—331; Centennial—296; field committees—331; permits for archeological and paleological research—316; requests retransfer of Lake Texoma to Corps of Engineers—327; sponsors introduction of National Trust legislation—315; suggests study of Alaska volcanoes—323.
- Interpretive devices, self-operating—312.
- Interpretive program. *See* Education.
- Isle Royale National Park, fire, 1948—320.
- Isleford Museum, donated to Acadia National Park—311.
- Jackson Hole National Monument: beetle control—321; conference with Wyoming officials—296; grazing in—330; narrowing of controversy over—296.
- Jackson, William H., paintings given to Scotts Bluff National Monument museum—310.
- Jackson Wing, completed at Scotts Bluff—295, 310.
- Jamestown Island, archaeological work on—315.
- Japan, national park study—326.

- Joshua Tree National Monument, land acquisition—322.
- Kaibab Tunnel project dropped—294.
- Kentucky Game and Fish Commission—318.
- Kings Canyon National Park: blister rust—321; forest fires—320.
- Kings Mountain National Military Park: museum—310; self-operating interpretive devices—312.
- Krug, Secretary J. A.: concession policy—298; Grand Canyon conference address—331; names Independence National Historical Park Advisory Committee—323; statement on park protection—295; wages and hours regulations—302.
- Labor regulations for concessioners—302.
- Lake Mead National Recreational Area: features named in—330; "Operation Snowbound"—330.
- Lake Texoma—327.
- Lands, acquisition of: Everglades National Park—295; by exchanges—322; general—321 et seq.
- Lassen National Park Co., contract extended—301.
- Lassen Volcanic National Park: Conard Peak and Meadows named in—330; Natural History Association—312; self-guiding nature trails—312.
- Legislation: authorizing St. Croix National Monument—324; Federal Property and Administration Services Act—325; for National Trust—315; for purchase of Rainier National Park Co. assets—301; H. R. 5472 (connection with Mining City dam proposal)—295; on Olympic National Park—296; Public Law 616—324; sought to permit participation in airport construction—328.
- Leland, Dr. Waldo G.—328.
- Lemke, Representative William—316.
- Lincoln Museum, self-operating interpretive devices—312.
- Livestock grazing—330.
- Loeffler contract—300.
- Mammoth Cave National Park: deer and grouse stocked—318; flood damage—306; threat of Mining City dam—294.
- Manassas National Battlefield Park: character of museum exhibits—309; museum completion—295; self-operating interpretive devices—312.
- Manly, Albert B.—323.
- Mauna Loa; eruption of—327; radio reporting of—303.
- McLean House, restoration—314.
- McLoughlin, Dr. John, house site uncovered at Fort Vancouver—315.
- Mesa Verde National Park: big horn sheep—318; guided trips, attendance—311; telephone equipment installed—303.
- Mills, Joe, peak named for—329.
- Mining City dam: authorization—295; threat to Mammoth Cave National Park—294.
- Model Land Co.—322.
- Montana State Game Department—317.
- Morris, Mrs. Elliston P., loan of furnishings for Perot-Morris House—315.
- Morristown National Historical Park, furnishings donated to—310.
- Mountain climbing in parks—329.
- Mount McKinley, climbs of—329.
- Mount McKinley National Park, Dall sheep—318.
- Mount Rainier National Park: concessions—301; fire hazards—320; flood and storm damage—306; mountain climbing-rescue school—329; Natural History Association—312; radio telephone system—303; self-guiding nature trails—312.
- Museums: completion of, at Manassas and Guilford Courthouse—295, 309; completion of Jackson Wing, Scotts Bluff—295, 310; Hui-o-Pele donation for Hawaii National Park—310; Isleford Museum donated to Acadia National Park—311; Kings Mountain National Military Park—310; place in interpretive program—309; preparation of exhibits for—311.
- Natchez Trace Parkway: construction progress—305; lack of right-of-way handicaps construction—305; radio equipment—303.
- National Council for Historic Sites and Buildings, office established in Washington, seeks national trust legislation—315.
- National Park Service: Grand Canyon conference—295; on Airport Committee—328; participation in storm relief—295; primary injunction upon—307; regionalization—297; review of surplus property applications—324; value of Advisory Board to—328.
- Natural beauty, need of preservation, Trevelyan quotation, and discussion—293.
- Natural History Associations: contribute funds for trail leaflets—312; publications programs—313.
- Needle miner, infestation at Bryce Canyon—321.
- Nene, in Hawaii National Park—319.
- New areas: Cape Hatteras National Seashore Recreational Area project—324; Castle Clinton National Monument project—324; De Soto Memorial—295, 324; Effigy Mounds National Monument project—324; Fort Vancouver National Monument project—324; George Washington Carver National Monument project—324; proposed—323; St. Croix National Monument project—324; San Juan National Historic Site—295, 313, 314.
- Nusbaum, Dr. Jesse L.—316.
- Oastler, Dr. Frank R., name given to Oastler Castle—329.
- Olympic National Park: plans for improved communications—303; status of boundary change proposal—296.
- Operation Snowbound—330.
- Pacific Northwest Field Committee—331.
- Parkways: construction backlog—302; summary of construction—306.
- Permits, revocable—307.
- Perot-Morris House: repair and rehabilitation—314; to be part of Independence National Historical Park—315.
- Personnel, general—325.
- Petrified Forest National Monument, polished wood specimens donated to—311.
- Phillips, Ted—332.
- Physical improvements, construction backlog—302.
- Publications of National Park Service and cooperating associations—313.
- Public Lands, House Committee on: hearings on Loeffler contract—301; told of concessions problem—300.
- Rainier National Park Co., pending legislation—301.
- Rangers: examination scheduled—325; reclassification—325.
- Reclamation, Commissioner of—294.
- Reclassification, rangers—325.
- Regionalization, 12 years of—297.
- Region Three Office, radio communication with monuments—303.
- Revocable permits—307.
- Richey, Charles A.—326.
- Roads and Trails: construction backlog—302; construction progress—303; costs of maintenance—304; maintenance—304; maintenance program evolved—304; mileage in National Park System—305.
- Rocky Mountain National Park: Elk problem—317; Mills Peak named—329; mountain climbing in—329; "Operation Snowbound"—330, 331; tower transmission line across park dropped—294; travel—332.
- Roosevelt (Theodore) National Memorial Park: dedication—316; "Operation Snowbound"—330.

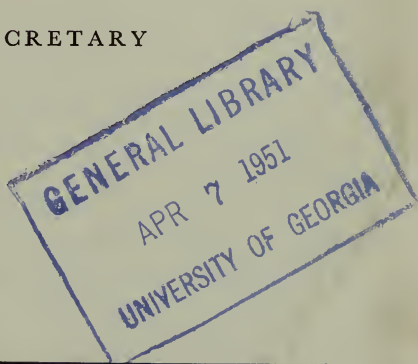
- San Juan National Historic Site: Army interest in repair of forts—314; establishment—295, 313.
- Sawtelle, Prof. Wilkin D.—311.
- Self-operating interpretive devices—312.
- Self-guiding nature trails—312.
- Scotts Bluff National Monument, completion of museum's Jackson Wing—295.
- Sequoia National Park, blister rust—321.
- Shadwell, Jefferson's birthplace—316.
- Shenandoah National Park, Carson Mountain named in—330.
- Shishaldin Volcano—323.
- Soil and moisture conservation—307.
- Southwestern Monuments Association—312.
- Spanish fortifications, San Juan National Historic Site—313.
- Spruce budworm, in Glacier National Park—321.
- Statistics: acreage of National Park System—332 et seq.; estimated development costs—302; road and trail mileage—305; travel—332 et seq.
- Statue of Liberty, development project—302.
- Storm relief, National Park Service participation in—295, 330.
- Surplus property: review of transfer applications—324; transfers of Fort McDowell and Fort Moultrie—325; transfers to National Park Service—306.
- Surrender Field, Yorktown, acquired—321.
- Texas Game, Fish, and Oyster Commission—318.
- Theodore Roosevelt. *See* Roosevelt (Theodore).
- Thomas Jefferson Birthplace Memorial Park Commission—316.
- Travel statistics—332.
- Trespass livestock grazing—330.
- Toll, Roger W., peak named for—329.
- Trevelyan, G. M., quotation need of preserving natural beauty—293.
- Trumpeter swan, apparent increase—318.
- Tumacacori National Monument, preservation of frescoes—314.
- Utah Parks Co., concession renewal—295, 301.
- Vandalism, influence of education on—308.
- Vanderbilt Mansion National Historic Site, fabrics deterioration studied—311.
- Walnut Canyon National Monument, self-guiding trail—312.
- War Assets Administration: conveys Fort Vancouver lands—324; National Park Service benefits from transfers of surplus—306.
- Water impoundment proposals: Glacier View Dam—294; Mining City dam—294; need of impartial appraisal—295.
- Whitman National Monument, archeological excavations at—315.
- Wildlife, of National Park System—317 et seq.
- Wind Cave National Park, wildlife losses—319.
- Wolverene, in Sequoia and Kings Canyon—318.
- Wright, George S., peak named for—329.
- Wyoming Fish and Game Commission, conference on Jackson Hole elk—296.
- Yavapai Observation Station, overtaxed—309.
- Yellowstone National Park: accommodations increased—299; beginnings of concession system in—297; elk problem—317; guided trips, attendance—311; "Operation Snowbound"—330; travel—332; trumpeter swan—318.
- Yosemite National Park: fire, 1948—320; motion picture—332.
- Young, Senator William—316.
- Zion National Park: concessions—301; deer problem—317; dinosaur tracks discovered—331; "Operation Snowbound"—330, 331.

ANNUAL REPORT
of the DIRECTOR
NATIONAL PARK SERVICE
to the
SECRETARY OF THE INTERIOR

Reprinted from the

ANNUAL REPORT OF THE SECRETARY
OF THE INTERIOR

For the Fiscal Year Ended June 30, 1950



Fiscal Year Ended June 30

1950



National Park Service

Newton B. Drury, *Director*



THE SERVICE AND USEFULNESS to the American public of the National Park System has increased in gratifying measure in the fiscal year 1950. That the Congress is coming more fully to appreciate the part the System plays in American life was attested by the substantial increases in appropriations for the year. These were sufficient, for the first time since the war, to permit adequate maintenance of roads and trails and to provide somewhat more of the most urgently needed physical improvements. Road construction was also carried on at a greater rate than had been possible in any year since the war. This progress, however, was no more than a bare start in catching up with the tremendous backlog of projects for which there is present need.

One problem above all others has faced the National Park Service in its endeavor to protect and preserve the invaluable scenic, scientific, and historic resources comprised in the National Park System. It has stood out in bold relief during the past year. There is a constantly growing demand for commercial utilization of resources in the parks, especially their flowing waters. Enlightened and broad-gage conservation organizations throughout the country share the concern of the National Park Service, and have given voice to it. They realize, as we do, that the future of the national parks is at stake.

We have noted in annual reports of the past several years the increasing number of instances in which projects in the programs of the Corps of Engineers and the Bureau of Reclamation have been based upon the expectation that dams and other water-control structures would be built in national parks and monuments or that even if located outside they would be permitted, in one way or another, to destroy or impair the beauty and interest of these places—the qualities which are the very basis of the special status which has been given them.

This trend highlights the necessity for long-range national planning for balanced use of our resources of all kinds in such a way that the cultural needs of the American people, of today and tomorrow, are not relegated to a subordinate position; that our national thinking is not guided by the false concept that economic benefits must take precedence, as a matter of course, over other benefits not expressible in money terms but of vital importance to the business of living. The American way of life calls for proper proportion between the two

kinds of demand made upon natural resources—those whose immediate purpose is economic and those whose immediate purpose is social and cultural. There is ample evidence that those who have worked for the establishment and protection of the National Park System, including many Congresses, have seen clearly the need of ministering to something more than bodily needs of men. There is need now for reaffirmation, plainly and unequivocally, of the concept that great natural beauty, the product of Nature's processes at work through eons of time, can and shall be preserved by this Nation as one of the things men live by, essential to fullness of life and not lightly to be destroyed.

Frequently heard are assertions that the construction of a dam and reservoir in a national park will leave it uninjured, or will improve it, scenically; that it will be "improved" for recreation; or that some other area "just as good" can be substituted for the one in which such a development is proposed. Americans long ago learned to be dubious of claims of "just as good."

Such assertions are based on a misconception of the essential character of these special areas and the purposes which they are designed to serve. The great national parks have been "set aside" to provide for human enjoyment of their natural features and their natural character. When the free flow of a stream is blocked and a valley is buried beneath impounded waters, that natural character is lost, and lost irretrievably. Leaving out of consideration the matter of the national interest—which is another question entirely—the exchange is one of a rarity for the relatively commonplace.

The National Park Service fully appreciates the value of water recreation. It is provided and encouraged in many of the areas of the National Park System. The Service works, wholeheartedly and conscientiously, with both the Bureau of Reclamation and the Corps of Engineers in exploring and appraising the recreational possibilities of the reservoirs they are constructing or planning. But it is not ready to admit—in fact, emphatically denies—that an artificial body of water is ever a satisfactory substitute for a natural scene so extraordinary or unique as to be deserving of national park or monument status. Opportunities for the kind of recreation obtainable from these reservoirs is certainly not going to be rare or hard to come at, in view of the immensity of the programs of the Corps of Engineers and the Bureau of Reclamation. Steadily, however, the greatest works of nature—and also many significant sites of history—are being deteriorated or destroyed in the zeal for commercial "progress."

The parks in wartime.—At the end of the fiscal year it was entirely too early to gage the implications of the international situation. However, the National Park Service, mindful of the great variety of uses to which the system was put during World War II, must be pre-

pared in case of necessity to devote them to purposes which will contribute to the welfare and safety of the Nation. Their greatest value, in any time of crisis, will always be that of supplying relief from physical and mental and spiritual tensions, of strengthening men and women for difficult and demanding tasks. That value was amply demonstrated in World War II. Eight million men and women in uniform visited the parks. To supply that value to the utmost, and to protect the areas and their facilities from damage or deterioration, it is necessary that the administrative and protective organization be maintained at effective strength at all times. It is possible to economize to an extent that, in the long run, is extravagant because it is wasteful. The system was the victim of such a situation from 1941 to 1945; it should not be again.

DAMS, PARKS, AND MONUMENTS

Dinosaur National Monument Dam proposals.—The National Park Service opposed the Bureau of Reclamation proposal to construct dams at Echo Park and Split Mountain, in Dinosaur National Monument, in Utah and Colorado. In this they had the unanimous support of the conservation groups of the Nation and of many individuals. The issues involved were thoroughly explored in a public hearing called by Secretary Chapman in Washington on April 3. With the Secretary's full approval, the National Park Service notified organizations and individuals believed to be opposed to the construction of dams in national park areas, and invited them to present their arguments at the hearing. The Service itself expressed its vigorous opposition, contending that outstanding scenery as well as significant natural and prehistoric features of concern to the Nation would be destroyed; that alternative outside dam sites could be utilized, and that departure from the policy of inviolate protection of the national parks would establish a dangerous precedent.

The building of the dams was supported by the Bureau of Reclamation and by representatives of the States which would benefit from the power to be produced from the two dams and from the storage of water which they would provide.

After full consideration of the evidence, Secretary Chapman decided to recommend to Congress that it authorize the construction of the two dams. On June 27, 1950, he stated:

I am not unmindful of the public interest in the inviolability of our national parks, and in the status, only a little less austere, of the national monuments. By no precedent of mine would I wish to endanger these places.

Weighing all the evidence in thoughtful consideration, I am impelled in the interest of the greatest public good to approve the completion of the Upper Colorado River Basin Report, including the construction of the dams in question, because:

(a) I am convinced that the plan is the most economical of water in a desert river basin and therefore in the highest public interest; and

(b) The order establishing the extension of the monument in the canyons in which the dams would be placed contemplated use of the monument for a water project, and my action, therefore, will not provide a precedent dangerous to other reserved areas.

I ask the National Park Service and the Bureau of Reclamation to cooperate fully in making plans that will insure the most appropriate recreational use of the Dinosaur National Monument, under the circumstances.

Ultimate decision on the proposals rests with the Congress. The Secretary's assurance that his decision was based upon special circumstances, and his reaffirmation of long-established policy as to the integrity of national park areas, is gratifying to the National Park Service.

Other dam proposals.—Several previous reports have made reference to the Corps of Engineers proposal to construct a flood control dam at Mining City which, under certain flood conditions, would cause water to be backed up into Mammoth Cave. The omnibus rivers and harbors flood-control bill, approved in May, was amended to prohibit construction of this dam "if such construction would have any adverse effect on Mammoth Cave National Park." Conservationists generally urge rescinding the authorization for the dam.

Several pending bills would authorize development of the full power potential of the Kings River watershed by the Bureau of Reclamation as part of the Central Valley project in California, and would authorize investigation of sites within Kings Canyon National Park. However, the Department has recommended elimination of the park from the provisions of these bills. Although Cedar Grove, containing developments serving park visitors, and Tehipite would still be subject to investigation and possible development, most conservationists familiar with these two exceptional segments of the Sierra country strongly oppose their being utilized for water storage.

Last August, Representative Mansfield, of Montana, introduced H. R. 6153, which would authorize and direct the Corps of Engineers to construct the Glacier View Dam, which would flood about 20,000 acres of Glacier National Park. Previously, the Secretaries of the Interior and the Army had agreed on its elimination from the present plans for the Columbia River Basin. The bill, on which the Department reported adversely, was referred to the House Committee on Public Works, which has not acted on it.

The Department was successful in its request that S. 75 be amended to limit the height of the proposed Bridge Canyon Dam on the Colorado River to an elevation of 1,877 feet.^a The original bill gave this as the minimum elevation. The change was sought in order to minimize the damage to Grand Canyon National Monument and Park.

The bill has passed the Senate but the House had taken no action on it at the close of the fiscal year.

Under the terms of a 1945 treaty with Mexico providing for the division of the waters of the lower Rio Grande, the International Boundary and Water Commission has authority to build an international dam in Big Bend National Park or at a site which would back water into it. Fortunately, the Service has found the executive officer of the Commission sympathetic to its desire to protect the park, and eager to find a site which will not involve injury to it.

PLANNING AND CONSTRUCTION

Needed development advances.—The completion of roads and trails and parkway construction and physical improvements throughout the National Park System was delayed by the late passage of the 1950 Appropriation Act. For many of the areas, funds became available too late to accomplish anything during the 1949 calendar year, and the letting of contracts had to be put over until late spring. Thus, though work under such contracts is expected to be largely completed during the 1950 construction season, very little of it was finished at the end of June.

Nevertheless, the past fiscal year has seen more progress in providing needed developments than in any other year since the war. The Congress provided somewhat more liberally for these needs, labor was more readily available, and materials prices were more stable than had been the case during the preceding years.

The physical improvements program consists mainly of campgrounds; utility systems such as water, sewer, power, and communications; and employee housing. Larger projects include such work as the completion of the museum building at Ocmulgee National Monument, begun several years before World War II; the restoration of Castle Clinton, not started by the end of the year, since the national monument was not officially established until mid-July 1950; extensive redevelopment at the Statue of Liberty; construction of a long-needed water-supply line to Mesa Verde National Park; and the museum building at Custer Battlefield National Monument.

Under the roads and trails program, emphasis has been placed on surfacing or resurfacing of existing roads, and on advancing the construction of roads previously started, in some cases before the war. The parkways program consisted of the normal process of advancing construction as far as funds would permit.

In spite of the somewhat more liberal appropriation for physical improvements for 1950, it would take many years to provide the improvements that are already needed; and the need of spreading avail-

able funds as widely as possible prevents economical expenditure, since it is necessary to handle piecemeal many projects that could be constructed more cheaply if covered by a single contract. In a number of places—Glacier National Park, for example—expensive equipment must still be stored in structures which, if they burned, would destroy equipment worth considerably more than would be required to provide safe storage. Invaluable museum materials—some of them irreplaceable—are also in danger of destruction until they can be safely housed.

Regional reorganization of planning and construction groups.—The union of architecture, engineering, and landscape architecture into a single division, put into effect in the Washington office several years ago, was applied to the regional offices during the past year to establish in each a single division of planning and construction, headed by an assistant regional director. This change was made to provide close coordination of all the types of professional and technical effort which have a part in the planning, construction, and maintenance of physical facilities in the National Park System.

Housing shortage continues serious.—During the past 2 years, 30 employee residences have been completed or started. These, and the few units completed previously, may be expected slightly to alleviate the shortage. However, it is estimated that 591 units are required to provide satisfactory housing, so the amount of alleviation is slight. Of the 479 single residences required (the balance being apartments or dormitory units), slightly less than half should contain either 3 or 4 bedrooms. These cannot be built, however, under the space and funds restrictions presently imposed.

More areas hook up with commercial power.—During the past year Carlsbad Caverns, Yellowstone, Yosemite, and Olympic National Parks; Devils Tower, Dinosaur, Effigy Mounds, and El Morro National Monuments; and Theodore Roosevelt National Memorial Park have established, or undertaken negotiations for, electrical service from local electric companies and REA cooperatives. These replace the expensive, limited, and often unreliable power units previously established in these areas.

Radio communications being extended rapidly.—To reduce the heavy costs of replacing or repairing telephone lines, frequently damaged by storms and floods, and to insure more reliable communications, the installation of radio systems is being rapidly expanded. At the end of the fiscal year, the \$74,000 system at Mount Rainier was about 60 percent complete, and will be finished before the end of the calendar year. So also will that at Olympic, costing \$84,000. Isle Royale National Park, approximately 70 miles from Houghton on Michigan's Upper Peninsula, is being equipped with the most modern type of FM radio equipment for communicating with mainland park

headquarters at Houghton and points on the island. These installations will eliminate all telephone-wire lines in the park, except those required for serving the developed areas.

Water.—Construction of the West Mancos water supply system for Mesa Verde National Park, long planned to replace the expensive and unsatisfactory deep-well supply, has at last been assured and is well started. Three contracts for materials and construction, totaling \$321,579.70, were awarded. Necessary rights-of-way were obtained from the Forest Service and the Bureau of Land Management; private lands are being crossed on canal and ditch rights-of-way reserved in patents issued under the act of August 30, 1890. Conditional rights to 107,700 gallons a day were decreed in June 1943.

Statue of Liberty undergoing transformation.—Utilizing the \$500,000 earmarked for the purpose in the 1949 appropriation and more than \$300,000 of 1950 funds, the Service's long-planned improvement program for Statute of Liberty National Monument is now well under way. Contracts were awarded before the end of the fiscal year for work to be done during the 1950 and 1951 calendar years. A major improvement will be the substitution, for the pier now in use on the east side of the island, of a new covered pier on the west side, approximately in the same location as the old wooden pier on that side which has long been in disrepair and unused. Among other projects covered are dredging a boat-turning basin and channel near the new pier; riprap and land-fill work at the north end of the island; erection of an addition to the concessions building, on which construction was started before the war; and installation of underground utilities for the new residence area. Other work already completed includes a heating system for the statue; demolition of additional obsolete buildings; riprap and fill; planting of trees and shrubs; and the installation of lipstick-proof carrara glass informational signs.

Much work remains to be done, the most important being the completion of the protecting sea wall, to extend completely around the island.

Mississippi River Parkway survey begun.—By an act approved last August, the National Park Service and the Bureau of Public Roads were authorized to investigate and report to Congress on the feasibility of constructing a parkway following generally the course of the Mississippi River from its source to the Gulf, and as to the most desirable method of its establishment and administration. Of the \$250,000 authorization, \$150,000 was appropriated for the 1950 fiscal year.

The survey is being conducted under the joint direction of H. J. Spellman, division engineer of the Bureau of Public Roads, and T. C. Vint, chief of Planning and Construction for the National Park Service. Stanley W. Abbott, formerly superintendent of the Blue Ridge Parkway, is in charge of the Service's part of the work.

An advisory group, the Mississippi River Parkway Planning Commission, with 90 members appointed by the governors of the 10 Mississippi River States, has been set up. It is headed by A. P. Greensfelder of St. Louis. To keep the members of the commission, members of Congress, the press, and interested individuals informed of the progress of the survey, its staff is issuing and distributing a bulletin at intervals of a month or so. Progress during the short period since the staff was set up has been most satisfactory.

Roads and trails maintenance.—This was the first year of operation under the 5-year program of catching up on the backlog of special roads-and-trails maintenance items, deferred because of the war, before they reach such a stage of disrepair as to require reconstruction. With \$3,500,000 available for roads-and-trails maintenance, it was possible to do routine work and to liquidate about 21 percent of the backlog.

The equipment amortization program, begun this year, provides more adequately than previously for the replacement of road and trail equipment which had had to be kept in service long past the point of economy. Through it, maintenance costs have been definitely reduced.

Mount Rushmore sculptures floodlighted.—The installation of floodlights for the heads of Washington, Jefferson, Lincoln, and Theodore Roosevelt at the Mount Rushmore National Memorial, for which funds were earmarked in the 1949 appropriation, was completed last November. The installation consists of 54 1,500-watt floodlights placed in two locations approximately 1,400 feet in front of and 400 feet below the images. It includes also the electrical distribution system and trail and parking-area lighting. It is expected that a few additional lights at a third location, to eliminate undesirable shadows, will be installed this summer.

Hot Springs cooling system placed in operation.—The cooling and distribution system for the thermal waters of Hot Springs National Park, for which engineering investigations and surveys were started in 1937, was completed early in 1950, and the cooled-water service was made available to the bathing concessioners last January. Initiation of the project, first postponed because of the war, was again delayed by the 1946 Presidential order postponing all Government construction projects not absolutely necessary.

The need for such a cooling plant, constructed at a cost of approximately \$164,000, was recognized for many years, during which the cooling of the spring water was accomplished by its exposure to air passing through cooling towers. Contact with the air caused the loss of some of the radon emanation, considered to be a source of therapeutic value of the water. In addition, the water absorbed pollen and dust, and there was an appreciable evaporation loss.

HISTORY AND PREHISTORY

The basic laws relating to the National Park Service make the preservation of historic sites, structures, and objects and their display for the public benefit one of its major duties. The properties which the Service administers cover an extraordinarily wide range of prehistory and of the history of the Nation from the earliest periods of colonization up to relatively recent times. The past year has seen much progress in rounding out these holdings.

Establishment of Effigy Mounds National Monument, in Iowa, brought into the system an outstanding example of the mound builders' handiwork in a region not hitherto represented. The new DeSoto Memorial in Florida is a reminder of another phase of the history of Europeans in America, the precolonial exploration. The expected acquisition of St. Croix Island, Maine, authorized as a national monument, will add the significant remains of the 1604 settlement established there by De Monts and Champlain. Staffing of San Juan National Historic Site in the Puerto Rican capital has revealed a great curiosity, among both residents and visitors, about those gigantic defense works and their significance in the history of the New World.

Particularly gratifying is the fact that the first, but extremely important, steps have been taken toward establishment of Independence National Historical Park, embracing sites and structures of supreme importance in the Republic's history. Related to these, is the Deshler-Morris House, in Germantown, which is to have the status of a detached portion of the Independence National Historical Park project.

These and all the other prehistoric and historic properties of which the Service has custody demand the most exacting care; their truthful and fair interpretation to the public equally requires a continuous program of research. In a number of important instances, this involves the use of archeological techniques, which have been applied to such sites as Fort Raleigh, Jamestown and Yorktown, Hopewell Village, Saratoga, Fort Vancouver, and the Whitman Mission. At all those places archeological "digs" have produced materials and brought out facts of importance and significance. Much of the material is still to be studied, classified, and evaluated.

Real progress in historical research.—The past year was a fruitful one in the field of historical research, despite the fact that this work by field historians has to be sandwiched in among many other duties. A ground cover study at the Saratoga National Historical Park, as of the date of the 1777 battle, disclosed the true distribution of fields and woods and made known other physical features of the historic terrain. A similar historical base map was made of the Wilderness Battlefield, part of the Fredericksburg and Spottsylvania County

National Military Park. A preliminary historical study was made of the layout plan of the 1604 settlement on St. Croix Island, Maine. Test excavations there unearthed stone foundations believed to have been those of one of the principal buildings of the settlement. Historical studies by the historian at Fort Sumter National Monument disclosed the physical appearance of the fort at three critical periods of its wartime history.

At Gettysburg National Military Park, preliminary investigations were made of the origin and past history of the Gettysburg Cyclorama, the famous painting which depicts the battle at the time of Pickett's Charge. In connection with the Independence National Historical Park project, the site of Franklin Court, historically important as the site of Benjamin Franklin's residence in Philadelphia, was identified and the boundaries of the estate defined.

Western historical areas likewise received attention. A detailed, well-illustrated survey of the history and physical structure of Fort Vancouver, Wash., was prepared and mimeographed in connection with the national monument project there. Preliminary studies were made of the authenticity of the Elkhorn Ranch site and the Maltese Cross Ranch Cabin of Theodore Roosevelt. A study was also made of his participation in the Stockmen's Association as a cattle owner in the Dakotas.

Studies have been started on the history and historical source materials relating to the ancient fortifications of San Juan, P. R., of which the principal remaining works are included in the San Juan National Historic Site. A study of the ancient City of Refuge, on the island of Hawaii, proved the desirability of preserving it as a national historic site.

Three important research reports in the field of archeology were prepared. One deals with the Bynum site, on the Natchez Trace Parkway in Mississippi, which is prehistoric. This report is being printed. The other two deal with historical areas—the second season's excavations at the Whitman National Monument, in Washington, and the excavations at Fort Raleigh National Historic Site, N. C.

One of the most interesting developments of the year was the 3-month study, in Great Britain and on the Continent, of early glass-house sites and early glass-making technology as known to experts abroad, and as exemplified in European museum collections. This assignment was carried out by Archeologist J. C. Harrington, who had excavated the glass works at Glass House Point, Jamestown; it was financed by a donation of \$2,500 by Glass Crafts of America, an association of companies producing handmade glass.

Numerous historic areas dedicated.—The year has been marked by the number of dedicatory ceremonies at sites of historical signifi-

cance. The authorization of establishment of St. Croix Island National Monument was celebrated at Calais, Maine, and on the island, on July 2, 1949, by speakers representing both the United States and the French Governments. Dr. Douglas S. Freeman, noted historian of the Civil War, was the speaker of the day at well-publicised exercises held on August 29, 1949, dedicating the Dogan House at Manassas National Battlefield Park, which had been purchased by the Prince William County Chamber of Commerce and presented to the Federal Government for addition to the park. On March 24, 1950, De Soto National Memorial at Bradenton, Fla., was dedicated. The dedication of the reconstructed McLean House, at Appomattox Court House National Historical Monument, in Virginia, on April 16, 1950, attracted a tremendous throng. The presence of Maj. Gen. U. S. Grant, III, and of Robert E. Lee, IV, lent particular interest to the event. Dr. Douglas S. Freeman again was the principal speaker. The State of Virginia has provided \$5,000 to furnish the parlor of the McLean House where Lee and Grant met on April 9, 1865. The Virginia Federation of Women's Clubs is providing \$800 for landscaping the grounds.

The statue of Cabrillo, originally presented to the State of California, was erected on the grounds of Cabrillo National Monument after a somewhat controversial and wandering history, and was dedicated with impressive ceremony on September 28, 1949.

Governor Lane of Maryland made the dedication address when Hampton National Historic Site, near Towson, Md., was dedicated on April 30, 1950. The Deshler-Morris House, in Germantown, Pa., was dedicated and formally opened to the public on May 16, with Ronald F. Lee, chief historian of the National Park Service, delivering the dedicatory address. Under cooperative agreements, Hampton is being administered by the Society for the Preservation of Maryland Antiquities, the Deshler-Morris House by the Germantown Historical Society.

Coincident with an address on foreign affairs which made international headlines, President Truman dedicated the Jefferson National Expansion Memorial project in St. Louis, on June 10, 1950, on the occasion of the reunion of the Thirty-fifth Division, of which he is a member.

Interpretation of historical areas.—Like the other areas in the National Park System, the many historical areas administered by the Service have felt the impact of a steady increase of visitors. During the last travel year these totaled 12,362,917. We have reported previously that the staggering number of visitors to such shrines as the Home of Franklin D. Roosevelt and the Lee Mansion threatened the safety of those buildings. This year it has become necessary to rely

upon self-guiding devices at the Vanderbilt Mansion National Historic Site, at Hyde Park, and at other heavily visited area. Fortunately, the public has liked the printed guide sheets and other devices substituted for more personal guide service.

The new museum exhibits at Manassas National Battlefield Park have proved enormously helpful and continue to elicit much favorable comment. On July 4, 1949, the Governor of North Carolina and other distinguished guests participated in the opening of the new Guilford Courthouse Museum exhibits. Some of these were generously contributed by representatives of the English regiments which participated in the battle of March 15, 1781.

Funds are now available for construction of the museum at Custer Battlefield National Monument. The year has brought progress in planning its exhibits, as well as those in honor of John Peter Zenger's contribution to freedom of the press which are to be placed in the Federal Hall Memorial in New York City.

Chief historian at Paris conference.—The Service was honored by the selection of Ronald F. Lee, its chief historian, as a delegate from the United States on the Committee of Experts on Sites and Monuments of Art and History, assembled in Paris, France, on October 17–21, 1949, by the Director-General of UNESCO. Mr. Lee was chosen rapporteur for the meeting, which included representatives from 12 countries. The committee formulated recommendations to UNESCO regarding the character of the program which it should consider developing to further international cooperation in the preservation of historical and archaeological sites and buildings.

River Basin salvage archeology.—Contracts with State universities and State historical societies and museums to excavate important archeological sites to be inundated by multipurpose reservoirs have made possible great strides in the task of salvage. Under these contracts, the Federal Government supplies funds and equipment while the contracting agencies furnish scientific personnel, additional funds, and laboratory facilities.

Within the Missouri Basin, contracts have been entered into with the following agencies for excavation of the several reservoirs indicated: University of Nebraska Laboratory of Anthropology, Harlan County Reservoir; Nebraska State Historical Society Museum, Trenton Reservoir; Universities of Kansas and South Dakota, Fort Randall Reservoir; North Dakota State Historical Society, Garrison Reservoir; University of Wyoming, Boysen Reservoir; and University of Montana, Canyon Ferry Reservoir.

Elsewhere, the Service has entered into contracts with the University of Texas for work in the Falcon Reservoir, and with the University of New Mexico for intensive excavations in the Chamita Reservoir.

Congress authorizes national trust.—The National Trust for Historic Preservation in the United States was organized on May 1, 1950, under the chairmanship of Mr. David E. Finley, director of the National Gallery of Art, as authorized in an act of Congress approved by the President on October 26, 1949. Modeled after the National Trust of Great Britain, its purpose is to supplement, on a national scale, the work of the National Park Service in holding intact sites, buildings, or other objects significant in American history. The legislation which authorizes its establishment was sponsored by the Department of the Interior and supported by the National Council for Historic Sites and Buildings.

Other officers of the Trust include Maj. Gen. U. S. Grant, III, Vice Chairman, and Ronald F. Lee, chief historian of the National Park Service, Secretary. The Secretary of the Interior, Attorney General of the United States, and Director of the National Gallery of Art, are *ex officio* members of its board of trustees. Other members of the Board are Horace M. Albright, Charles S. Bird, John Nicholas Brown, Harry L. Bullis, Mrs. Francis B. Crowninshield, Herbert Hoover, Gen. George C. Marshall, George A. McAneny, H. Alexander Smith, Jr., and Robert Woods Bliss.

Independence National Historical Park moves steadily ahead.—Pursuant to the act of Congress authorizing establishment of the Independence National Historical Park, the Department has entered into a cooperative agreement with the city of Philadelphia under which the National Park Service will take over custody of the Independence Hall structures and grounds in Independence Square, Philadelphia, beginning January 1, 1951. Covered by the agreement are Independence Hall, Congress Hall, Old City Hall, and associated historic objects connected with the adoption of the Declaration of Independence by the Continental Congress, the meeting place of that Congress, the seat of the Government of the United States during the Revolution and the period 1790–1800, and the meeting place of the Constitutional Convention of 1787.

The buildings in Independence Square contain a priceless collection of historic paintings and historic objects, including the Liberty Bell. They attract about a million visitors each year. By the terms of a special cooperative agreement with the Carpenters Company of Philadelphia, historic Carpenters Hall will also be exhibited by the National Park Service as a part of the Independence National Historical Park program.

For the 1950 fiscal year, Congress appropriated \$500,000 to enable the National Park Service to begin its acquisition program, and it provided contract authorization in the amount of \$3,935,000. A project office was established in Philadelphia by the Service at that time.

Appraisal of historical areas.—Preliminary to the formulation of recommendations by the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments on proposed additions of historical properties to the System, it is almost invariably necessary to undertake a certain amount of research in order that the Board may evaluate them properly. That this is a sizable task is indicated by the fact that the Service conducted such research in connection with 78 proposals for additions to existing historical areas or for new areas. Forty-three of these were covered by bills introduced into the House or Senate and reports on all of them were prepared for submission to Congress.

These constitute only a part of the research which Service historians and archeologists must carry on in order that the interpretive program may be brought to its highest effectiveness and the full usefulness of our historical and archeological possessions may be realized. During the 14 months from January 1, 1949, to May 1, 1950, the historical staff prepared 40 research reports. It also produced 12 historical studies relating to surplus forts and military posts to assist in their proper disposition as State historical parks and monuments, and 3 reports on reservoir areas to encourage the preservation of historical values in areas to be flooded. On their own time, the members of this same group produced 14 articles and 3 pamphlets on historical subjects.

Archeologists of the Service prepared 22 archeological reports, of which 11 were printed in professional journals, as were 5 other reports produced in off-duty hours. In addition, 34 archeological reports dealing with river basins were prepared in collaboration with the Smithsonian Institution and in association with colleges and universities cooperating with the Service and the Smithsonian in river-basin archeological salvage.

NATURAL HISTORY

Interpretive activities.—The public's appetite for greater knowledge and understanding of the natural phenomena of the national parks shows no sign of decrease. The satisfaction of this desire is certainly one of the most constructive functions of the National Park Service, but the performance of the task continues to lag seriously behind need. Though there was a slight increase in employment of seasonal rangers and ranger-naturalists, the percentage of increase in number of visitors utilizing their services considerably outran it. The handicap of increased numbers—or rather of insufficiencies of staff to care adequately for them—is such that much of the effectiveness of the work is lost.

Much thought has been given to methods of dispensing information at entrance stations, particularly in the larger parks and those in

which the visitor volume has increased at a much greater than average rate. To expedite the handling of visitors, it has been necessary to install cash registers or accounting machines in some parks, and there is no satisfactory opportunity to give out needed information or to enlist cooperation in the protection of the natural features. Real contact with the visitor is highly important.

Parking areas inside the gates, attractive information offices, and, above all, enough competent personnel to man them have been suggested and in some cases have been approved, but their installation must await the availability of funds.

Statistically speaking.—The records of the past year show that the Service's naturalists have conducted 24,076 guided trips, with 1,144,250 persons participating. They have given 25,987 talks, principally at evening campfire programs, to an attendance of 2,442,834. Other informational contacts by this group brought the total to 4,333,963 persons. Visitors have also been reported at unattended interpretive stations and devices and in museums to the number of 6,741,196.

In the museum field.—The year has brought very tangible progress in the Service's museum activities. Three new museums were opened, and work is in progress on the preparation of exhibits for three more. The opening ceremonies at Guilford Courthouse National Military Park have been mentioned elsewhere. Hampton, near Baltimore, completely repaired through the generous provision of funds by the Avalon Foundation, is a house museum. The reconstructed McLean House at Appomattox Court House National Historical Monument was also placed on exhibition with appropriate furniture. At Scotts Bluff National Monument, water colors, sketches, and photographs by the late William H. Jackson were installed in the new Jackson wing to illustrate the Oregon Trail story.

Complete interpretive displays telling the story of the Battle of Chickamauga were in preparation for the headquarters museum on the battlefield. Helped by funds donated by the Hui-O-Pele Society, work was begun on a museum for Hawaii National Park. The Museum Laboratory completed and shipped the first two of seven major exhibits, and work on others was underway. Additional exhibits are being prepared in Hawaii. Work has been started on exhibits for Ocmulgee National Monument, where a contract has been let for completion of the museum building, begun before the war. A contract has also been let for erection of a modern museum and administration building at Custer Battlefield National Monument.

For the second year an in-service training course in museum methods, with a class of 10, was conducted at the laboratory as a combined operation of the Natural History and History Divisions in order to develop a body of field employees familiar with the everyday poli-

cies and techniques required to maintain and use their museums skillfully.

As custodian of many objects of scientific or historical value, the National Park Service has the responsibility of protecting them from all kinds of damage and deterioration caused by such common agents as fire, sunlight, mold, insects, and rodents—a major problem. Reports of surveys undertaken during the year demonstrated the need so clearly that a continuing program of inspection and treatment by experts has been set up to begin during the 1951 fiscal year.

Natural history associations.—Organization of the Olympic Natural History Association during the past year brought the number of these designated cooperating organizations throughout the Service to 21. Additional associations are being organized at Joshua Tree National Monument and Acadia National Park. Because of their official cooperative status these organizations are required to submit annual reports to the Director of the National Park Service, which are analyzed carefully by the Natural History Division.

The associations carry on a variety of money-making activities. One of the most important is the production and sale of literature of various kinds. Earnings are used to advance the interpretive programs in the areas in which they function. Gifts of equipment needed in the conduct of these programs are among the most tangible evidences of their assistance. Motion picture and slide projectors, record players, sound recorders, cameras, lenses, range finders, and many other items of tools, equipment, and supplies are listed among their contributions during the past year. Approximately \$2,000 of association funds were spent to purchase books, magazines, pamphlets, and supplies for park libraries. The Glacier Natural History Association expended more than \$1,000 for the purchase of private lands and a mining claim. These organizations perform an invaluable service to the interpretive program.

Wildlife overpopulations.—Though an important principle of national park management is to present wildlife “natural” and with the minimum of manipulation, control measures are necessary occasionally, especially when natural controls or outside hunting fail to hold populations to safe carrying capacity of the range. Elk, mule deer, and moose present problems of this kind in a number of areas.

One of the most serious is that of the northern Yellowstone elk herd. Weather conditions last winter prevented the needed reduction from 11,000 animals to 6,000. The actual reduction totaled less than 1,000—507 killed in the park, 316 live-trapped and shipped elsewhere, and probably not as many as 50 killed by hunters outside of the park. Drastic action will be required next winter to avert almost total destruction of winter browse in the park. At Rocky Mountain,

legal hunting outside and official killing within produced a needed reduction of 500 elk. Hunting and natural causes have brought the elk of Glacier National Park down about one-third.

Bison reductions were carried out both in Yellowstone and in Colorado National Monument. Enlargement of the range, by throwing the bison on lands formerly in the Custer Recreational Demonstration Area, provided relief for the 400 head at Wind Cave.

The mule deer is a problem species in several areas. Last winter the Service destroyed 100 at Rocky Mountain because of the critical state of the food supply. California parks generally are overpopulated.

Rare species.—The past decade has seen an improvement in health and numbers of bighorn at Glacier, while Dall sheep in Mount McKinley are increasing about 20 percent annually. Elsewhere, bighorns are not thriving. The population is stationary at Rocky Mountain, declining in Yellowstone, and apparently extinct in Zion and in Dinosaur National Monument.

Trumpeter swans in Yellowstone had a highly successful nesting season in 1949, the August census revealing 54 adults and 21 cygnets. Results this year will probably be somewhat less favorable.

Fishes and fishing.—Though there is a tremendous amount of fishing throughout the National Park System, manpower has been generally inadequate to gather even the most elementary information on fishery resources and the drain due to angling. Many areas greatly need personnel to guide fishery and other wildlife programs.

Enlargement of Everglades National Park to include Florida Bay has paved the way to better protection of important fish resources, depleted by commercial overfishing to the detriment of fish-eating birds of exceptional interest. Anglers are finding better sport at Shenandoah under the new policy which prohibits stocking legal-size fish. Fishing pressure at Yellowstone has made necessary a catch-limit reduction to five a day. Total protection is given to grayling because of the alarming decrease in that species. —

Axis deer for island of Hawaii opposed.—The proposal of the Territorial Board of Agriculture and Forestry to introduce axis deer on the island of Hawaii for the benefit of sportsmen created considerable apprehension in view of the experience there with other feral animals. So unanimous was the public protest that the Board reconsidered its decision and voted to defer action on the project.

PARK ACCOMMODATIONS

Secretary Chapman approves revision of concession policies.—The need of improvement and expansion of overnight accommodations and appurtenant facilities in many areas became evident immediately

after wartime controls on travel were removed in 1945, and has become greater each year. Former Secretary Krug late in 1948 enunciated new concessions policies. It was hoped that with a definite statement of policy by the Secretary it would be possible to induce park concessioners to add to their facilities. However, funds for substantial capital investments proved unobtainable; concessioners insisted that the Secretary's policy did not furnish either the security or the incentive necessary to encourage risk capital. This position was emphasized in hearings held by the House Committee on Public Lands.

On assuming office, Secretary Chapman undertook a restudy of the whole concession situation. A first result was his revision of the regulations governing labor conditions for concessioners' employees, to place park concessioners on a par with their competitors outside the parks. He established a standard workweek of 48 hours, with time and a half for overtime, for all concessioners except those in States which require more favorable hours and wages for hotel employees.

The Secretary called for the recommendations of the National Park Service, on the basis of its experience in serving the public through concessions contracts, and approved the following principles governing concessions:

(a) Rates shall be approved primarily on the basis of charges for comparable services and in accordance with general custom for similar outside operations, with due regard to a reasonable profit, taking into account the difficulty and risk of the enterprise.

(b) A preferential opportunity will be granted existing concessioners to negotiate a new contract if they have rendered satisfactory service during the life of their expiring contracts.

(c) It will be the Department's policy to cancel existing contracts prior to their expiration and grant new contracts to the same parties for an additional term (such additional term not to exceed the statutory term of 20 years) in order to attract investments in needed facilities.

(d) An option to purchase the concessioner's facilities may be exercised by the Secretary only at the end of the contract period or other termination of the contract; funds shall be available to the Department 12 months prior to the exercise of the option by the Government, and when the option has been exercised a valid contract between the parties shall exist.

(e) The present provisions of the form contract relating to the purchase of the facilities of an existing concessioner by a successor concessioner shall be continued in the form contract.

(f) The Government recognizes the concessioners' right of possession in structures and facilities erected by them, and appropriate pro-

visions relating to this subject shall be incorporated in the form contract.

(g) Except as otherwise provided by law, the National Park Service may procure new concessioners without the requirement of public advertising, in accordance with the provisions of existing law. A similar procedure may be followed also in the event it becomes necessary to replace an existing unsatisfactory concessioner.

(h) The requirement that the concessioner set aside 10 percent of the gross receipts from the rental of overnight facilities to be used to maintain and repair such facilities is eliminated, as well as the supplemental depreciation reserve provision.

Regarding the moot subject of franchise fees, Secretary Chapman stated:

As a general policy, it is my desire that franchise fees should be related to gross revenues rather than net profits. Accordingly, I would prefer some franchise-fee provision which would make a flat fee charge in the nature of a reasonable amount for ground rent, with the requirement that the concessioner would pay an additional franchise fee for the privilege of doing business in the parks, and for services and facilities furnished, based on gross revenues in excess of a stipulated amount, such stipulated amount to be the estimated "break-even" point. In some cases, however, it may be necessary for a franchise fee to be charged on some other basis, such as net profit. In such cases, the franchise fee and other related provisions to be incorporated in the contract will be for determination on the merits of the particular case and in the light of the circumstances then prevailing. Moreover, where advisable, a provision should be included in concession contracts, regardless of the type of franchise fee charged, which will permit either party to the contract to reopen the subject of franchise fees each 5 years for renegotiation.

We are encouraged to believe that under these policies the concessioners will feel that they are being given a fair chance to make a satisfactory return on their investment, and that the hazards of their business are definitely understood. We believe it possible now, in most cases, to negotiate new contracts with a promise of improvements and expansion where plainly justified by public demand.

Pending restudy of the concession policy and the decision of Secretary Chapman on the revisions recommended by the Service, all but two concession contracts expiring during the year were extended to December 31, 1950, with the expectation that new contracts will be entered into at that time. By then, contracts will be required for 17 concessioners.

New concessions established.—Five new concessions have been established during the past year.

At Coulee Dam National Recreational Area, the Grand Coulee Navigation Co., composed of citizens of the locality, entered into a 20-year contract to furnish recreational facilities on Franklin D. Roosevelt Lake. As soon as the Government is able to install the necessary roads

and utilities, this concessioner will establish facilities at the Old Fort Spokane and Kettle Falls areas.

The other new concessions cover an interesting variety of services. One provides for photographic service at Big Bend National Park, to include lecturing and field trips on photography. Another covers transportation from the mainland to Anacapa and other islands of Channel Islands National Monument, Calif., and boat rental, refreshments, and meals and lodging on a barge at Anacapa. Northern Consolidated Airlines, Inc., was given a contract to establish camps, lodges, and incidental facilities at two bases in Katmai National Monument, and to provide air and water transportation services. A new temporary refreshment concession was authorized on the South Rim at Black Canyon of the Gunnison National Monument.

Rehabilitation and extension of facilities.—There has been steady progress in the rehabilitation of concessioners' plants. While the principal accent has been on sanitation and safety, much has been done to provide improved accommodations. This has included such betterments as replacement of wood stoves with gas stoves, adding new mattresses and springs, and adding running water and, in some cases, baths.

The automatic sprinkler system and much of the rehabilitation at Lake Hotel in Yellowstone have been completed. The entire hotel, including kitchen and dining room, is expected to be ready for occupancy at the beginning of the 1951 season. An automatic sprinkler system is also being installed in the hotel at Oregon Caves National Monument.

To provide expanded overnight accommodations in Yellowstone as early as possible, it has been decided to delay development at West Thumb and instead to build additional cabins at Fishing Bridge Tourist Camp and Lake Lodge and cottages at Lake Hotel. At the present level of appropriations, it would take 2 or 3 years for the National Park Service to provide utility systems and construct roads, paths, and parking areas at West Thumb. The concessioner would also have to build costly central lodge buildings before any cabins could be used. For the same expenditure, a greater number of lodging units can be provided earlier at existing camps, lodges, and hotels. Of the 266 additional cabin rooms which the Yellowstone Park Co. has programed for the next 2 years, the major portion is scheduled for completion before the 1951 tourist season.

In Yosemite National Park, a new multiple-room unit to provide lodging for 84 persons is nearing completion as a part of the new Yosemite Lodge development. Other units are expected to follow as the Yosemite Park & Curry Co. is able to finance them.

The Virginia Sky-Line Co. expects to have the new kitchen and dining room at Skyland, in Shenandoah National Park, ready for opera-

tion by the beginning of the 1951 season. The Service has completed the road and parking area for it and is well advanced in providing utility connections.

On the Blue Ridge Parkway, at Doughton Park, N. C., new 24-unit lodging structures were completed and in use last summer. Rough-It housekeeping cabins to accommodate about 32 persons were completed near Rocky Knob, in Virginia.

In Everglades National Park, on Coot Bay, the Service has installed temporary facilities for meals, refreshments, toilets, gasoline service, and boat rentals, which are to be operated by National Park Concessions, Inc. Permanent accommodations will not be provided until the land-acquisition program is further advanced.

New employee dormitory structures have been completed by Deggan's, the store concessioner, in the New Village at Yosemite National Park, and by the Sequoia and Kings Canyon National Park Co. at Camp Kaweah.

Ski facilities were installed by the Service on a temporary basis at Cayuse Pass, Mount Rainier National Park, last fall in the hope that a solution might be found for the problem of winter use of this park. Snowfall was exceptionally heavy last winter, complicating the problem of access, and the venture was not considered successful. Meanwhile, because winter operation of overnight facilities in the park has so consistently entailed serious losses for the Rainier National Park Co., it has been authorized to close down all its facilities during the coming winter.

The demand for overnight facilities in this park is great, and a considerable part of the present plant has long outlived its usefulness. The problem of replacement must be faced soon.

Plans for development at Hurricane Ridge, in Olympic National Park, include a lodge and a ranger station, both to be constructed by the Service. The lodge is designed in two units. One of these is to be for general public use; the other will be for overnight accommodations. Invitations to bid on the construction of the public service unit of the lodge had been advertised before the end of the fiscal year; no bids were received, however. The first section of the Hurricane Ridge Road is now under construction.

Isle Royale presents puzzling problem.—Isle Royale continues to present the problem of how to obtain satisfactory transportation from the mainland without increased accommodations in the park, and how to finance additional accommodations without reliable and safe transportation. Formerly, many visitors reached the island by one of the large lake excursion steamers or were brought in from Port Arthur, Ontario, by a Canadian boat. Neither service is available this year. Visitors are compelled to depend on two small boats, so small that

many consider them unsafe, operating out of Copper Harbor, Mich., and Grand Marais, Minn.

Concession audits.—With the establishment of the new Audit Division and the employment of 25 temporary auditors, the past year has, for the first time, brought a decrease in the backlog of unaudited annual reports of concessioners. Beginning January 1, 1950, with 665 annual reports on hand for audit, 265 were audited before June 30. Meantime, 170 additional reports were received. Because the staff will have to be greatly reduced during the 1951 fiscal year, it will probably be unable to continue this gain on the heavy backlog of 570 unaudited reports on hand at the end of the year.

THE LAND PROGRAM

At the beginning of the fiscal year, the in-holdings in the national park system, excluding Everglades National Park, were estimated at 600,000 acres. During the year, by various means, this total was reduced by 64,903 acres. However, there is no possibility that this rate of progress can be maintained, since it cannot be expected that the large donations and extensive exchanges of the past year will be duplicated in the future.

Donations.—Land donations during the year aggregated 34,718 acres. The largest of these, of course, was that of lands in Jackson Hole National Monument and Grand Teton National Park, given by Jackson Hole Preserve, Inc., a corporation financed by John D. Rockefeller, Jr. Reference is made elsewhere to this magnificent gift. Mr. Rockefeller and others also donated 235.94 acres of land in Acadia National Park.

Other gifts included the Gen. Philip Schuyler Mansion, donated by George S. Lowber and others, for addition to Saratoga National Historical Park; 24.18 acres for the DeSoto National Memorial; and 1,000 acres, given by the State of Iowa for establishment of Effigy Mounds National Monument. The State of Virginia contributed \$17,000 toward the purchase of the Stone House property at Manassas National Battlefield Park. The State of Louisiana purchased and presented to the Federal Government 36.36 acres of land, an important portion of the Battlefield of New Orleans, for addition to Chalmette National Historical Park.

Purchases.—The purchase of 1,907 acres of land in eight national parks and monuments was completed at a cost of \$196,000. Included was a section of land in Glacier National Park, purchased from the State of Montana. At the time agreement was reached on the purchase price of this parcel, a tentative agreement on a program for acquisition of the remaining State holdings, including some of the finest yellow pine timber in the park, was reached with the State Board of Land

Commissioners. The Service is greatly encouraged by the cooperative attitude of Governor Bonner and the board in the effort to reach a solution of this situation.

Transfers.—Additions of lands, by transfer from other Federal agencies, totaled 45,080 acres. The outstanding transfer was that of 44,170 acres from the Tennessee Valley Authority for addition to Great Smoky Mountains National Park.

Everglades National Park.—On February 22, 1950, Secretary Chapman enlarged Everglades National Park from approximately 460,000 acres to 1,228,500 acres, including waters and submerged lands. Approximately 128,000 acres of privately owned land within the enlarged park are still to be acquired with the balance remaining from the \$2,000,000 donated by the State of Florida for the purpose. Approximately \$600,000 has been expended for 231,000 acres.

Last October Congress authorized the use of donated funds in condemnation of lands for the park, and a condemnation proceeding has been filed to obtain the remaining lands. However, numerous small parcels are being acquired through negotiation.

Two estates deeded to Blue Ridge Parkway.—Some 7,642 acres, in two estates in North Carolina, were proffered to the United States during the past year for addition to the Blue Ridge Parkway. These were the Moses H. Cone Memorial Park, in Watauga County, 3,500 acres, being donated by the Moses H. Cone Memorial Hospital, Greensboro, N. C., and the Julian H. Price Memorial Park, near Blowing Rock, 4,132 acres, being given by the Jefferson Standard Life Insurance Co. Both are to be formally designated as soon as the Attorney General approves title to the lands. These estates will add greatly to the recreational usefulness of the parkway, which traverses them.

Exchanges.—Thanks to splendid Bureau of Land Management and landowner cooperation, exchanges for unreserved public domain under the Taylor Grazing Act reduced inholdings in four western national monuments by 28,253 acres. Other exchanges, involving many thousands of acres, are being negotiated.

Abolishment of areas.—The former Father Millet Cross National Monument has been conveyed to the State of New York to become a part of the Fort Niagara State Park, as provided by an act of Congress approved September 7, 1949.

The Department of the Interior has recommended, and the Department of Agriculture and the Congressional Representatives from the districts concerned have concurred in, the proposal to abolish Wheeler and Holy Cross National Monuments, in Colorado. Both are considered lacking in the significance that would justify retaining them in the National Park System. Legislation authorizing their abolishment and transfer of the lands back to the Forest Service was pending at the end of the year.

Progress on authorized projects.—Two new areas were added to the national park system during the year. These were the De Soto National Memorial, Fla., on August 5, 1949, and the Effigy Mounds National Monument, Iowa, on October 25, 1949. At the end of the year, establishment of Castle Clinton National Monument, in New York City, awaited only the formal approval of title from the city by the Attorney General.

With the revival of interest in the Cape Hatteras National Seashore project, Governor Kerr Scott of North Carolina reactivated the Cape Hatteras Seashore Commission last January, under the chairmanship of George Ross, director of the North Carolina Department of Conservation and Development. Governor Patteson of West Virginia also announced that he planned to appoint a committee to arrange for acquisition of the West Virginia lands to be included in the authorized Harpers Ferry National Monument.

Negotiations with the Department of the Army for the additional lands needed for establishment of Fort Vancouver National Monument, in Washington, appear to be reaching a mutually satisfactory conclusion.

Moccasin Bend.—Lands lying within the Moccasin Bend of the Tennessee River, important terrain in the Civil War campaign around Chattanooga, will be added to Chickamauga and Chattanooga National Military Park, if plans involving participation in the purchase by the State of Tennessee, Hamilton County, the city of Chattanooga, and private donors are successful. City and county would each contribute \$50,000, the State \$100,000, and private donors the balance of the approximate \$250,000 cost. Congressional approval of addition of the lands to the park will be required.

PROTECTION OF FORESTS

Fire prevention and control.—Last year's fire record was characterized by abnormally severe lightning occurrence, a comparatively large total area burned, and the largest total cost of fire suppression. However, the forest area burned over was much below average as was the total number of man-caused fires. There were 399 fires which started inside or entered areas of the National Park System during the year: 89 percent were held to less than 10 acres. Lightning caused 177 fires. The area burned over consisted of 3,530 acres of forest, 4,054 acres of brush, and 20,497 acres of grass.

Eight fires covered more than 300 acres each. The largest was a 17,000-acre incendiary grass fire in Lava Beds National Monument. Another grass and brush fire, entering the same area from the outside, burned over 2,800 acres. Everglades National Park, which is pioneering protection from fire in that portion of southern Florida and still

inadequately staffed, had three relatively large fires. Lightning fires in remote sections of Sequoia and Yellowstone National Parks and a large smoker fire in the latter park were responsible for most of the high costs of suppression. The Yellowstone fires occurred when all protection agencies in the Northern Rockies were busy controlling numerous blazes.

The fire records of the Service for the past two decades were critically analyzed in an attempt to discover means for reducing the number, size, and cost, or otherwise to improve future action on fires. The analysis clearly indicated some of the major weaknesses to be the thinness with which staffs are spread for protection of large, rugged and inaccessible areas; the great diversity of activities and responsibilities, in addition to fire control, which must be carried by key personnel; the unsatisfactory communications; the inaccuracy of many existing area maps; and insufficient use of aerial detection and attack on fires in remote areas.

Protection from insect epidemics.—The serious epidemic of the mountain pine beetle which, for several years, has taken a heavy toll of the lodgepole pine forests of the Teton and Targhee National Forests, Grand Teton National Park, and Jackson Hole National Monument continues to threaten the forests of those areas and the 1,350,000 acres of lodgepole in Yellowstone National Park. Intensive control efforts have been continued cooperatively by the Bureau of Entomology and Plant Quarantine, Forest Service, and National Park Service, but the delay in providing appropriations in 1949 prevented completing the contemplated program. Some additional work was possible during the fall of 1949, and the program is being intensively carried on this year. Additional work will be needed during the 1951 fiscal year to bring this infestation under control.

Adjacent to Rocky Mountain National Park forest insects are causing serious damage. The spruce bark beetle which has ravaged much western Colorado forest is an imminent threat to the fine spruce forests of the park. On the east side of the continental divide the Douglas-fir in and adjoining the park is heavily infested by the Douglas-fir bark beetle.

The pine bark-beetle infestation in Great Smoky Mountains National Park has apparently been effectively controlled. In other parks and monuments the customary maintenance control work has been effective in keeping incipient infestations from developing into serious epidemics.

White pine blister rust control.—Satisfactory progress was made during the 1950 fiscal year by park organizations, with excellent cooperation from the Bureau of Entomology and Plant Quarantine, on control work to protect white pine forests from blister rust in 11

National Park System areas. Through the use of chemicals and hand eradication a total of 3,105,400 ribes were destroyed on 19,504 acres.

Approximately 47 percent of those portions of the 13 areas in which control is being accomplished is now on a maintenance basis. Initial eradication of ribes has been completed in Lassen Volcanic, Acadia, Glacier, Great Smoky Mountains, and Mount Rainier National Parks and on the Blue Ridge Parkway.

A very comprehensive reappraisal of blister-rust-control projects in the California parks was made by personnel of the Pacific coast regional office of the Bureau of Entomology and Plant Quarantine in cooperation with park foresters. Resulting from this appraisal, 58,700 acres were deleted from the control area in Sequoia National Park, and 39,093 acres from that in Yosemite National Park, because the expected cost of attaining control was higher than the values would justify.

Forest clean-up and rehabilitation at Acadia National Park.—Rehabilitation and clean-up of burned-over areas caused by the disastrous forest fire that swept over portions of Acadia National Park in 1947 continued during the 1950 fiscal year. Since the initiation of the project early in 1948, approximately 7½ million board feet of fire-killed timber and 275 cords of pulpwood have been removed from 2,730 acres of park lands. In addition, approximately 2,100 acres have received burned-areas treatment and 50 miles of trails have been cleared of fire-killed debris.

Originally it was thought that considerable forest planting would be required in order to restore vegetation to the burned-over areas. However, nature is providing a vegetative cover, and generally the burned areas are restocking to the same species as were destroyed by the fire.

JACKSON HOLE AND GRAND TETON

An example of extraordinary public service, and an aid to settling the long controversy over Jackson Hole National Monument, was the gift by John D. Rockefeller, Jr., to the people of the United States on December 16, 1949, of 33,562 acres of land in Grand Teton National Park and Jackson Hole National Monument. The presentation was made by Laurance S. Rockefeller, president of Jackson Hole Preserve, Inc., and was accepted in a brief but impressive ceremony by Secretary Chapman.

The lands transferred were acquired by Mr. Rockefeller over a period of a quarter of a century with the intention of ultimately placing them under the National Park Service so that they might be protected and made available for public use and enjoyment. This generous

undertaking, representing an investment of more than \$2,000,000, is but one of many related to the national parks for which the American people have reason to be grateful to Mr. Rockefeller.

Senator O'Mahoney, of Wyoming, chairman of the Committee on Interior and Insular Affairs, having expressed to the President his warm approval of the gift of the Jackson Hole Preserve lands, immediately set about the task of resolving the remaining obstacles to settlement of the Jackson Hole controversy. His interest, and that of Senator Hunt and Representative Barrett, is specifically represented in a bill, S. 3409, of which the major provisions are:

(a) Enlargement of Grand Teton National Park to include all but approximately 9,000 acres of the Jackson Hole National Monument.

(b) Transfer of 6,376 acres of land now in the monument to the adjoining National Elk Refuge, and 2,806 acres to Teton National Forest.

(c) Confirmation of existing privileges with respect to rights-of-way and stock driveways and of the status quo of existing leases, permits, and licenses.

(d) Full reimbursement to Teton County for loss of taxes occasioned by transfer of privately owned lands to the Federal Government for a period of 5 years after such transfer, with progressive decreases of 5 percent from the original amount for 20 years thereafter.

Of the last of its provisions, covered by section 6 of the bill, Secretary Chapman, in his report to Senator O'Mahoney as chairman of the Senate Committee on Interior and Insular Affairs, stated that that section represents what may prove to be the best solution that can be reached concerning the necessary control of the Jackson Hole elk herd. This section provides, in effect, for joint Federal and State agreement as to the necessity for controlled reduction of elk within the park area. It also provides for the deputizing as Federal rangers of such hunters as may be necessary to reduce the number of elk within the area. I wish to emphasize that not only is any form of hunting contrary to the basic national park concept, as well as the statutes enacted by the Congress for administration of the National Park System, but that this Department would much prefer to have an elk herd controlled by some other method if a feasible solution could be found.

There is another point regarding section 6 * * * which might give people some concern. The way the bill now reads would indicate that it is the intent that the entire Jackson Hole elk herd would be under the joint jurisdiction of the Wyoming Game and Fish Commission and the National Park Service. I know that is not the intent and, therefore, feel that some change should be made in order to clarify this point.

COOPERATIVE ACTIVITIES

Cooperation with the States.—Nearly half of the States were given requested assistance by the Service during the year. In five States Service representatives participated in in-service training institutes

for their State park personnel. Review of master and lay-out plans, site surveys, help in preparation of park manuals, and preparation of a prospectus for a capital improvement program are some of the other types of assistance rendered.

Working under a joint agreement between the Department and the Governor of North Dakota, the Service is cooperating with that State in completing the International Peace Garden State Park for which Congress appropriated \$25,000 of a total authorization of \$100,000.

Real property disposal.—The National Park Service has continued its cooperation with the General Services Administration and other agencies by investigating applications for surplus properties desired by State and local governments for park, recreational area, and historic monument purposes and formulating recommendations as to disposal, in accordance with the requirements of Public Law 616, Eightieth Congress. Action was completed on applications for 39 separate properties, purchased by the United States for more than \$7,000,000. Angel Island (Fort McDowell) in San Francisco Bay, valued at approximately \$750,000, was one of the larger properties requested by local authorities for multi-purpose use. Florida has requested the transfer of the St. Joseph's Bay Military Reservation of approximately 3,600 acres.

Reservoir development and management program.—The joint program of the Bureau of Reclamation and the Service for the development and management of reservoir recreational resources was implemented by the 1950 Interior Appropriation Act. This authorized the transfer of a maximum of \$25,000 per reservoir from the Bureau to the Service for the preparation of recreational development plans, and provided \$162,150 for development at Medicine Creek and Enders Reservoirs in Nebraska and Angostura Reservoir in South Dakota.

Using detailed plans prepared by the Service, the Bureau proceeded with developments at the two Nebraska reservoirs and is negotiating with the United States Forest Service on details of the Angostura development program. An agreement, now awaiting the Secretary's approval, was worked out with the State of Nebraska for the management of all reservoir areas in that State.

Alaska recreational resources survey.—Field reconnaissance, launching an investigation of Alaska's scenic, scientific, historical, and recreational resources, was begun by the Service in May in order to develop a long-range plan for parks and recreation and to augment the development of the Territory's tourist facilities. An appropriation of \$10,000 was available for the work. It is expected that additional funds will be appropriated for 1951. Several years will be required to complete the survey.

River basin studies.—Cooperation was maintained with the Bureau of Reclamation and the Corps of Engineers in appraising recreational values and planning recreational use of their reservoirs. Investigation and appraisal of paleontological and archeological materials by the Smithsonian Institution under an interbureau agreement is a part of this program.

In 5 years, 379 sites have been investigated and reported on; however, basin-wide surveys, directed toward proper provision for recreation as an important element in river-basin planning, are vitally needed. A start in this direction has been made in the Rogue River Basin in Oregon. The Service's report on the recreational aspects of this Basin, with recommendations for protecting scenic and other recreational values, was submitted to the Pacific Northwest Field Committee in November 1949. Its report, *A Survey of the Recreational Resources of the Colorado River Basin*, based on studies begun in 1941, has been published.

PUBLICATIONS

Public demand for the informational publications of the National Park Service has increased in proportion to the increase in visitors; and the issuance of such material must of necessity have first priority on such funds as are available for printing. During the past year, requisitions were issued for 6,239,000 pieces of this literature, which is distributed without charge to visitors and to others who request it.

The year also saw the issuance of the first three of a new series of historical handbooks, dealing with Custer Battlefield National Monument, The Lincoln Museum and The House Where Lincoln Died, and Jamestown. This series, replacing the former series of 16-page brochures dealing with historic and prehistoric areas, makes use of well-designed covers in color and of ample illustration.

Other new sales publications include *Franklin D. Roosevelt at Hyde Park*, by Mrs. Eleanor Roosevelt; *Dinosaur National Monument, Past and Present*, by William Lee Stokes, of the Geological Survey and the University of Utah; and *Artillery Through the Ages*, by Albert C. Manucy. The last of these, illustrated by the author, has attained considerable popularity among military men. The *Recreational Areas of the United States*, a map produced during the 1949 fiscal year by the former United States Travel Division of the National Park Service, was also placed on sale through the Superintendent of Documents.

Natural history associations and similar cooperating organizations continued to supplement the Service's program with a variety of publications dealing with natural history, history and archeology. During the calendar year 1949, some 15 items were produced; 8 of these were new; 7 were reprints or revisions of previously issued items.

PERSONNEL

Park ranger examination.—Important both as to numbers affected and the improvement of morale, was the park ranger examination held on a Nation-wide basis last August. The first such examination given since 1937, it produced an eligible register of 325 names. Included were 104 of the 128 incumbents of permanent park ranger positions who had been appointed during and after the war with the proviso that they would be separated if they did not establish sufficiently high grades in the first appropriate postwar examination. All incumbents who were on the register have now been given permanent appointments. The removal of uncertainty as to tenure undoubtedly held in the career service many promising young men who might otherwise have left it.

In-service training.—The first series of in-service training courses since the war, aimed specifically at identifying and developing selected employees for more responsible administrative posts, was completed during the year. One course has been given in each region, the last having been in the Region 4 Office, San Francisco, last March.

Approximately 25 employees below grade 9 are carefully selected in each region for these courses. Assembled in the regional office, this group receives 10 days of intensive instruction in all phases of Service policy and administration. Instructors have included the Director, the Department's Director of Personnel, representatives of the FBI and the Bureau of the Budget, and other administrative and technical experts within the Service. The process has been most successful in identifying and evaluating administrative talent.

SAFETY

Administering many areas which, because of their rugged terrain or their thermal features, invite accidents to the careless or the unwary, the National Park Service is acutely conscious of its responsibility to promote safe public use and to devise and install facilities, within reason, calculated to reduce the chances of injury or death. In addition, its field personnel are continuously schooled both in accident prevention and in rescue work. In the latter connection, it is worth noting that there were no fatalities among Service personnel during the year, in spite of the fact that they were called on to perform a number of hazardous rescues.

During the calendar year 1949, there were 44 fatalities among visitors. The causes, and the number of fatalities from each, were as follows:

Motor vehicles, 18; drowning, 13; falls (mountain climbing), 7; electrocution, 1; skiing, 1; scalding (thermal areas), 2; and unknown,

2. The number of visitor-accident fatalities during the first 6 months of 1950 totaled 11, compared with 17 during the same period of 1949.

The first use of a helicopter for rescue work in Yosemite National Park was in the most unusual rescue, last July, of Terrence Hallinan, 12 years old. Thrown from a horse near Benson Lake, the boy suffered a severe brain concussion and could not be moved out safely in any other way.

WASHINGTON OFFICE REORGANIZED

The establishment of an additional Assistant Director position and three new divisions, and the reallocation of general supervision, on behalf of the Director, of the work of all divisions to the Associate Director and two Assistant Directors were the most important features of a reorganization of the Washington office, which was made effective during the past year. Conrad L. Wirth, who had headed the Land and Recreational Planning Division, is the new Assistant Director. An Audit Division was established to handle audits both of concession accounts and reports and of the Service's field accounting offices. James B. Robinson, former Assistant Chief of Public Services, was made Chief of the Audit Division. A Land Planning Division and a Recreational Planning Division were established out of the Land and Recreational Planning Division. Charles A. Richey, who had been Assistant Chief of that Division, became Chief of Land Planning, and Special Assistant to the Director Ben H. Thompson was transferred to the position of Chief of Recreational Planning.

General supervision of the Planning and Construction, Land Planning, Public Services, and Safety Divisions was assigned to Associate Director Demaray; of the Forestry, Legal, Audit, Fiscal, Personnel, and General Services Divisions to Assistant Director Tolson; and of the History, Information, Natural History, and Recreational Planning Divisions to Assistant Director Wirth.

THE PARKS OF THE NATIONAL CAPITAL

The parks of the National Capital, including a considerable acreage lying outside of the District of Columbia, comprise one unit of the National Park System. The office of National Capital Parks also administers several additional units of the System such as the Lincoln Memorial, Washington Monument, Lee Mansion, and Thomas Jefferson National Memorial.

Events of the past year worthy of mention include the transfer of the Suitland Parkway to National Capital Parks jurisdiction; the virtual completion of the Rock Creek Park Amphitheatre, seating 4,000, in connection with the Washington Sesquicentennial; an ex-

tensive program of improvements at Great Falls on the Chesapeake & Ohio Canal; the renovation of the Washington tourist camp in East Potomac Park; the casting of sculptures, through the generosity of the Italian Government, for the Memorial Bridge across the Potomac; and the erection and unveiling of the Artigas statue, facing Constitution Avenue at Eighteenth Street.

All swimming pools operated by the office of National Capital Parks were opened for the season on a completely unsegregated basis and have so operated without incident.

NOTES FROM WASHINGTON AND THE FIELD

1950 eruption of Mauna Loa.—On June 1, 1950, exactly a year after its 1949 eruption ceased, Mauna Loa Volcano, in Hawaii National Park, resumed eruptive activity. This had ceased again on or about June 22. In terms of lava produced, this most recent eruption may prove to be the largest in historic times. At the end of June, the North Kona section of the island remained isolated from South Kona by the third or south flow, still too hot for road crews to cut through or over it. The other two flows which crossed the main belt road had cooled enough to permit rough roads to be bulldozed through them.

Ease of access to the flows permitted thousands of persons to see the molten lava course its way down Mauna Loa's flanks and pour into the sea.

Of related interest is the fact that the seismograph at headquarters in Lassen Volcanic National Park during a 3-week period in March and April recorded more than 10,000 earthquake shocks, the area of disturbance being around the peak itself. At least 8 percent of the shocks were of sufficient intensity to be felt.

The challenge of the mountains.—Rocky Mountain National Park continues to register the largest number of mountain climbers. Longs Peak was climbed by 1,416 persons, of whom 74 went up the difficult East Face. Experienced mountaineers continue to gravitate to Grand Teton, which attracted climbers from 39 States and 9 foreign countries. There, 846 persons, in 252 different parties, registered for attempts at scaling one or more of the 10 major peaks, a considerable increase over the preceding year. At Mount Rainier, 57 percent of those who registered for the summit climb were successful. Twenty individuals, in three parties, reached the top of Devils Tower. Winter ascents at Grand Teton, Rocky Mountain, and Lassen Volcanic increased considerably.

In general, mountaineers have accepted the regulations covering ascents of major and difficult peaks, and few exceptions are taken to the registration and equipment inspection requirements. Not a single fatality was reported among the thousands who made regular ap-

proved ascents of major peaks. However, there were three fatalities among unregistered climbers at Yosemite, and two among hikers. Six climbers sliding on snow banks were injured at Rocky Mountain. Seven men who had been cautioned not to attempt the Mount Rainier climb because of insufficient experience and equipment were apprehended and fined for undertaking the climb without permission.

Last October two young men became separated and lost from their Colorado A & M Hikers Club party in Rocky Mountain and have not been found.

Centennial observances at Death Valley.—Attracted by a pageant depicting the Death Valley crossing by the emigrant parties of 1849, and the saving of the Bennett-Arcane party, an estimated 65,000 persons entered Death Valley National Monument on December 3, though only about 35,000 were able to reach the pageant scene on time. Held in Desolation Canyon, the pageant was featured by the 36-piece Hollywood Bowl Orchestra, the 100-voice Redlands Choral Group, and the first performance of "Death Valley Suite," written and conducted by Ferde Grofe for the occasion. The event was sponsored by the Death Valley 49ers, Inc., a volunteer organization composed of the supervisors of Inyo, Kern, San Bernardino, and Los Angeles Counties, the Automobile Club of Southern California, several prominent historians, and other interested citizens.

As part of the California Centennial observance, three historic landmark plaques, furnished by the State, were dedicated at appropriate locations in the monument.

Advisory Board chooses new officers.—With the resignation of Dr. Waldo G. Leland from the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments, after 4 years of extraordinarily effective service as its chairman, Charles G. Sauers, superintendent of the Cook County (Ill.) Forest Preserve, was elected to succeed him at a meeting of the Board in April. Dr. Theodore G. Blegen, dean of the Graduate School at the University of Minnesota, was chosen to succeed Mr. Sauers as vice chairman. Dr. Frank M. Setzler, head curator of anthropology, United States National Museum, was re-elected secretary.

A second vacancy in the membership of the Board was created by the resignation of Mrs. Reau Folk, Nashville, Tenn., former regent of the Ladies Hermitage Association. At the year's end, neither vacancy had been filled. Dr. Leland will continue his distinguished service as a collaborator of the National Park Service.

Glacier National Park economic survey.—The Bureau of Business and Economic Research of the University of Montana acted as consultant on a pilot survey of Glacier National Park visitation during the summer of 1949, to determine the economic value of Glacier

National Park to the State. Of particular interest is the fact that 75 percent of all the parties surveyed stated that they came to Montana primarily to see Glacier National Park.

Fort Sumter explored for live ammunition.—The Service cooperated with the War Trophy Safety Committee in a public demonstration of mine detection to uncover still unexploded Civil War ammunition at Fort Sumter National Monument on August 20, 1949. High officials of the armed services, the Treasury Department, and the National Rifle Association participated in the demonstration, which included the detonation, under the direction of a Navy expert, of Civil War shells found on the area. It was designed primarily to focus public attention on the desirability of having live ammunition war trophies deactivated.

Travel records again broken.—Travel to all areas administered by the National Park Service, during the travel year, October 1, 1948, to September 30, 1949, with a total of 31,864,180, exceeded that recorded for the previous year by more than 2,000,000. For the succeeding 9 months, the total was 16,433,044, an increase of 1,762,023 over the same 1948-49 period. Excluded from this comparison is the count of 1,980,876 visitors at Lake Texoma, since that area reverted to Corps of Engineers administration on July 1, 1949.

Revenues.—The National Park Service total receipts from revenues during the 1950 fiscal year again set a new record. They were \$3,527,606, a gain of \$60,000 over 1949. Income from fees collected from visitors was \$2,946,202.

United States Travel Division ceases operation.—Reestablished at the beginning of the 1948 fiscal year, the United States Travel Division was compelled to discontinue its operations on October 1, 1949, since the 1950 appropriation act contained no funds for it. Under the direction of J. Lee Bossemeyer, who had been connected with the prewar United States Travel Bureau, the Division had established an enviable reputation for cooperation and usefulness among both public and private travel agencies. Its monthly publication, *Travel U. S. A.*, was in great demand, as were the other excellent publications which it had produced in its brief career.

Airport legislation.—Thanks chiefly to the cooperation extended by the Civil Aeronautics Administration, the Department was successful in obtaining legislation which granted it the authority to participate with other agencies in the development of airports, outside of the national parks, to serve these areas. One of its important results should be to relieve the pressure for the establishment of landing facilities within the boundaries of national park areas, to which, as a general principle, the Service is opposed.

First on the list of locations where adequate facilities are required is West Yellowstone, where existing facilities have proved so unsatis-

factory that scheduled air service is no longer provided there. The planned new airport will be outside of Yellowstone National Park.

Paradise Valley Road left uncleared of snow.—With accommodation at Paradise Valley closed during the winter, and skiing activities moved to the other side of the mountain, the road to Paradise Valley, Mount Rainier National Park, went uncleared last winter for the first time since the war. There were extraordinarily heavy snowfalls—102 inches in December and 151.5 inches in January at Longmire; these, combined with a cold spring and late snows, made the task of clearing the road for summer operations unusually difficult.

Jurisdiction suit decided.—Exclusive jurisdiction, ceded to the Federal Government by the State of California, applies to privately owned lands within Kings Canyon National Park, United States District Judge William C. Mathes concluded, in a decision rendered on June 22, 1950, in a suit brought by the United States against Harry T. Peterson. Peterson had been refused a Federal permit to sell liquor on private property in the Wilsonia subdivision, in the General Grant Grove section of the park, but had sold under a State license.

Judge Mathes refused to enjoin Peterson from continuing the sale of liquor. He stated that "criminal sanctions are provided for violation of National Park Service regulations." The State of California, which intervened in behalf of the defendant, is expected to appeal the decision on jurisdiction.

INDEX

A

Abolishment of areas—325.
 Acadia National Park: forest clean-up and rehabilitation—328; Natural History Association—318; ribes control—328.
 Advisory Board on National Parks, Historic Sites, Buildings, and Monuments—316, 335.
 Agreements, cooperative: with city of Philadelphia and Carpenters Company—315.
 Airport legislation—336.
 Alaska, recreational resources survey—330.
 Albright, Horace M.—315.
 Angel Island, Calif.—330.
 Angostura Reservoir, S. Dak.—330.
 Appomattox Court House National Historical Monument, McLean House dedication—313.
 Appropriations for National Park Service—303.
 Archeology: contracts for river basin work—314; research reports—312, 316; river basin salvage—314; techniques applied to historical areas—311.
 Army, Department of—326.
 Artigas statue—334.
 "Artillery Through the Ages"—331.
 Audit Division—324, 333.
 Avalon Foundation—317.
 Axis deer—319.

B

Barrett, Rep. Frank—329.
 Big Bend National Park: photo concession—322; Rio Grande dam project—307.
 Bighorns, status of—319.
 Bird, Charles S.—315.
 Bison—319.
 Black Canyon of the Gunnison National Monument—322.
 Blegen, Dr. Theodore G.—335.
 Bliss, Robert Woods—315.
 Blister rust, white pine—327.
 Blue Ridge Parkway: Cone and Price estates donated—325; new accommodations—323; ribes eradication—328.
 Bonner, Gov. John W.—325.
 Bossemeyer, J. Lee—336.
 Bridge Canyon Dam—306.
 Brown, John Nicholas—315.
 Bullis, Harry L.—315.
 Bynum Site, Natchez Trace, archeological report—312.

C

Cabrillo National Monument: Cabrillo statue—313.
 California, State of, intervenor in Kings Canyon National Park jurisdiction suit—337.
 Cape Hatteras National Seashore project—326.
 Carlsbad Caverns National Park—308.
 Carpenters Company of Philadelphia—315.
 Castle Clinton National Monument—307, 326.
 Cedar Grove, Calif.—306.
 Central Valley project, Calif.—306.
 Chalmette National Historical Park—324.
 Channel Islands National Monument—322.

Chapman, Secretary Oscar L.: accepts Rockefeller gift of Jackson Hole lands—328; approves revised concessions policy—319; comment on S. 3409—329; enlarges Everglades National Park—325; holds hearing on Dinosaur National Monument dam proposals—305; recommends building Dinosaur National Monument dams—305; restudy of concessions policy—320.
 Chesapeake & Ohio Canal—334.
 Chickamauga and Chattanooga National Military Park—326.
 Chickamauga, Battle of—317.
 City of Refuge, Hawaii, studies—312.
 Civil Aeronautics Administration—336.
 Climbing, mountain—334.
 Colorado National Monument—319.
 "Colorado River Basin, A Survey of the Recreational Resources of"—331.
 Commercial utilization of park resources—303.
 Committee of Experts on Sites and Monuments of Art and History—314.
 Concessions: audits—324; contract extensions—321; franchise fees—321; Krug policy—320; new—321; policy revision—319 et seq.; principles to govern—320; rehabilitation and extension of facilities—322.
 Cone, Moses H., Memorial Park—325.
 Congress: authorizes National Trust—315; authorizes use of donated funds in Everglades condemnations—325; long-time attitude toward parks—304; makes fuller provision for National Park Service—303; provides funds for Independence National Historical Park project—315.
 Conservation organizations oppose commercial use of park resources—303.
 Cooperative activities of National Park Service—329 et seq.
 Coulee Dam National Recreational Area—321.
 Crowninshield, Mrs. Francis B.—315.
 Custer Battlefield National Monument: historical handbook—331; museum building—307, 314, 317.

D

Dall sheep—319.
 Dams: Bridge Canyon, Ariz.—306; claims that they improve recreation in parks—304; Corps of Engineers and Bureau of Reclamation plans for—303; effects of, in parks—304; Glacier View, Mont.—306; Mining City, Ky.—306; Rio Grande—307.
 Dedications—312.
 Death Valley 49ers, Inc.—335.
 Death Valley National Monument—335.
 "Death Valley Suite"—335.
 Deer: axis—319; overpopulations—318; reduction at Rocky Mountain—319.
 Deshler-Morris House—311, 313.
 De Soto National Memorial—311, 313, 324, 326.
 Development in National Park System: commercial power hook-ups—308; delayed by late action on appropriation—307; Hot Springs cooling system—310; Mesa Verde water line—309; Mount Rushmore floodlights—310; parkways program—307; radio communication extensions—308; Statue of Liberty work—309; summary of year's work—307.
 Devils Tower National Monument: commercial power—308; successful climbs—334.

Dinosaur National Monument: bighorns extinct—319; commercial power for—308; dam proposals—305.
 "Dinosaur National Monument, Past and Present"—331.
 Dogan House, Manassas National Battlefield Park—313.
 Donations: by Iowa, of Effigy Mounds National Monument—324; by Virginia Federation of Women's Clubs, for McLean House planting—313; by Virginia, to furnish McLean House room 313; by Virginia, toward Stone House purchase—324; of Cone and Price estates for Blue Ridge Parkway—325; of land, by Jackson Hole Preserve, Inc.—324; of Schuyler Mansion—324.
 Doughton Park, Blue Ridge Parkway—323.

E

Echo Park, Dinosaur National Monument, dam proposal—305.
 Effigy Mounds National Monument—308, 311, 324, 326.
 Elk: Jackson Hole herd control proposal—329; northern Yellowstone herd reduction—318; overpopulations—318; Rocky Mountain reduction—318.
 Elkhorn Ranch studies—312.
 El Morro National Monument, commercial power for—308.
 Enders Reservoir, Nebr.—330.
 Engineers, Corps of: bill would direct, to build Glacier View Dam—306; Mining City, Ky., dam proposal—306; National Park Service cooperation with—304; plans for use of park waters—303.
 Entomology and Plant Quarantine, Bureau of—327, 328.
 Everglades National Park: enlarged by Secretary Chapman—325; enlargement helps fish protection—319; fires—326; National Park Concessions, Inc., facilities—323.
 Exchanges, land—325.

F

Father Millet Cross National Monument—325.
 Federal Hall Memorial—314.
 Finley, David E.—315.
 Fire prevention and control, statistics—326.
 Fish resources—319.
 Floodlights, Mount Rushmore National Memorial—310.
 Florida Bay—319.
 Folk, Mrs. Reau—335.
 Forest fires, statistics—326.
 Forest protection—326 et seq.
 Forest Service: cooperation on beetle control—327; National Park Service negotiations with, on Angostura Reservoir management—330.
 Fort Raleigh National Historic Site—311, 312.
 Fort Sumter National Monument: demonstration of ammunition detection and deactivation—336; historical studies—312.
 Fort Vancouver National Monument project: archeological work—311; negotiations with Department of the Army—326; survey report—312.
 Franklin, Benjamin, Philadelphia residence site identified—312.
 Freeman, Dr. Douglas S.—313.

G

General Services Administration—330.
 Germantown Historical Society—313.
 Gettysburg National Military Park—312.
 Glacier National Park: bighorns—319; economic survey—335; effects of Glacier View Dam on—306; endangered equipment in—308; lands purchased for—324; ribes control—328.
 Glacier Natural History Association—318.
 Glacier View Dam—306.
 Glass Crafts of America—312.
 Glassmaking study in Europe—312.
 Grand Canyon National Park and Bridge Canyon Dam—306.
 Grand Coulee Navigation Co.—321.
 Grand Teton National Park: beetle infestation—327; mountain climbing—334; proposed enlargement—329.

Grant, Maj. Gen. U. S., III—313, 315.
 Grayling protection—319.
 Great Smoky Mountains National Park: ribes control—328; TVA lands added to—325.
 Greensfelder, A. P.—310.
 Grofe, Ferde—335.
 Guilford Courthouse National Military Park—314.

H

Hampton National Historic Site—313, 317.
 Harpers Ferry National Monument project—326.
 Harrington, J. C.—312.
 Hawaii National Park: Mauna Loa eruption—334; museum exhibits—317.
 Hawaii Territorial Board of Agriculture and Forestry—319.
 Helicopter, use for rescue—333.
 Historical areas: appraisal of—316; visitor statistics—313.
 Historical handbook series—331.
 History Division—317.
 Holy Cross National Monument—325.
 Home of Franklin D. Roosevelt National Historic Site—313.
 Hoover, Herbert—315.
 Hopewell Village National Historic Site—311.
 Hot Springs National Park cooling system—310.
 Housing, employee—308.
 Hui-O-Pele Society—317.
 Hunt, Senator Lester C.—329.

I

Independence Hall—315.
 Independence National Historical Park project—311, 315.
 Insects, forest—327.
 In-service training—317, 332.
 Interior, Department of: International Peace Garden agreement—330; opposition to site investigations in Kings Canyon National Park—306; recommends abolishment of Holy Cross and Wheeler National Monuments—325; sponsors National Trust legislation—315.
 International Boundary and Water Commission—307.
 International Peace Garden State Park—330.
 Interpretation—313, 314, 316 et seq.
 Iowa, State of, donation of Effigy Mounds National Monument—324.
 Isle Royale National Park: radio communications—308; transportation—323.
 Italy, Government of—334.

J

Jackson Hole National Monument: addition of Rockefeller lands—324, 328; beetle infestation—327; disposition of lands, S. 3409—329.
 Jackson Hole Preserve, Inc.—324, 328.
 Jackson, William H.—317.
 Jamestown: archeological work—311; historical handbook—331.
 Jefferson National Expansion Memorial dedication by President Truman—313.
 Joshua Tree National Monument—318.
 Jurisdiction of National Park Service—337.

K

Kansas, University of—314.
 Katmai National Monument concession—322.
 Kings Canyon National Park: Department opposes dam site investigations in—306.
 Kings River: legislation for power development on—306.
 Krug, J. A., Secretary of the Interior: agreement with Army on Glacier View Dam—306; concessions policy—320.

L

Land Management, Bureau of—325.
 Land Planning Division—333.
 Land Program—324 et seq.

Lane, Gov. William P., Jr.—313.
 Lassen Volcanic National Park: earthquake shocks—334; ribes control—328; winter climbs—334.
 Lava Beds National Monument: incendiary fire—326.
 Lee Mansion National Memorial—313.
 Lee, Robert E., IV—313.
 Lee, Ronald F.—313, 314, 315.
 Leland, Dr. Waldo G.—335.
 "Lincoln Museum and the House Where Lincoln Died" Historical Handbook—331.
 Louisiana, State of, donation of land for Chalmette National Historical Park—324.

M

Maintenance, roads and trails—310.
 Maltese Cross Ranch cabin study—312.
 Mammoth Cave National Park, relation of Mining City dam to—306.
 Manassas National Battlefield Park: Dogan House dedication—313; museum—314; Virginia donation toward Stone House property purchase—324.
 Mansfield, Rep. Mike—306.
 Manucy, Albert C.—331.
 Marshall, Gen. George C.—315.
 Maryland Antiquities, Society for the Preservation of—313.
 Mauna Loa, 1950 eruption—334.
 McAneny, George A.—315.
 McLean House—313, 317.
 Medicine Creek Reservoir, Nebr.—330.
 Mesa Verde National Park water-line construction—307.
 Mining City dam—306.
 Mississippi River Parkway Planning Commission—310.
 Mississippi River Parkway Survey—309.
 Moccasin Bend, Tenn.—326.
 Montana, State of: Board of Land Commissioners—324; Glacier National Park land purchase from—324.
 Montana, University of: archeological excavation contract—314; Glacier National Park economic survey by Bureau of Business and Economic Research—335.
 Moose overpopulations—318.
 Mountain climbing—334.
 Mount McKinley National Park—319.
 Mount Rainier National Park: fines for unauthorized climbs—335; mountain climbing—334; Paradise Valley road—337; radio communications—308; ribes control—328; temporary ski facilities—323.
 Mount Rushmore National Memorial—310.
 Museum: Custer Battlefield National Monument—307, 314; Guilford Courthouse National Military Park—314; in-service training—317; Manassas National Battlefield Park—314; materials endangered—308; National Park Service activity—317; Ocmulgee National Monument—307.

N

Natchez Trace Parkway: Bynum site report—312.
 National Capital Parks—333.
 National Park Concessions, Inc.—323.
 National Council for Historic Sites and Buildings—315.
 National Park Service: appreciation of value of water recreation—304; arguments against Dinosaur dams—305; cooperation in beetle control—327; cooperation on recreation plans for Dinosaur—306; cooperation with Engineers and Reclamation—304; cooperation with General Services Administration—330; cooperation with States—329; negotiations on reservoir management—330; provides for water recreation in System—304; publications—331; publishes report on recreational resources of Colorado River Basin—331; recommends on concessions policy—320; reports on Rogue River Basin recreational resources—331; reservoir planning cooperation with Reclamation—330; responsibilities in field of history and prehistory—311; responsibility for visitors' safety—332; revenues, 1950 fiscal year—336; suit over jurisdiction at Kings Canyon National Park—337; to assume custody of Independence Hall—315; Washington office reorganized—333.
 National parks in wartime—304.

National Trust for Historic Preservation in the United States—315.
 Natural History—316 et seq.
 Natural History Associations—318, 331.
 Natural History Division—317, 318.
 Nebraska State Historical Society Museum—314.
 Nebraska, State of—330.
 Nebraska, University of, Laboratory of Anthropology—314.
 New Mexico, University of—314.
 North Dakota State Historical Society—314.
 Northern Consolidated Airlines, Inc.—322.

O

Ocmulgee National Monument museum—307, 317.
 Olympic National Park: commercial power—308; Hurricane Ridge development—323; Natural History Association—318; radio communications—308.
 O'Mahoney, Senator Joseph C.—329.
 Oregon Caves National Monument—322.

P

Pacific Northwest Field Committee—331.
 Paradise Valley road, Mount Rainier National Park—337.
 Parkways: construction—307; Mississippi River survey—309.
 Patteson, Gov. Okey L.—326.
 Personnel—332.
 Philadelphia, city of—315.
 Planning, national, for cultural needs—303.
 Power, commercial, extensions—308.
 Price, Julian H., Memorial Park—325.
 Prince William County Chamber of Commerce—313.
 Publications—331.
 Public Lands Committee, House of Representatives—320.
 Public Works Committee, House of Representatives—306.

R

Radio communications—308.
 Rainier National Park Co.—323.
 Ranger (park) examination—332.
 Real property disposal—330.
 Reclamation, Bureau of: cooperation on recreation plans for Dinosaur—306; Dinosaur National Monument dam proposals—305; funds transfer for reservoir planning—330; National Park Service cooperation with—304; planning for Kings River, Calif.—306; plans for use of park waters—303.
 Recreational Areas of the United States, map—331.
 Recreational Planning Division—333.
 Regulations, National Park Service, on mountain climbing—334.
 Reorganization: in regions—308; in Washington office—333.
 Research—311, 316.
 Reservoirs: appraisal of recreational values—304; development and management—330.
 Revenues of National Park Service—336.
 Richey, Charles A.—333.
 River basins: National Park Service and Smithsonian studies—331; salvage archeology—314.
 Roads and trails, maintenance—310.
 Robinson, James B.—333.
 Rock Creek Amphitheatre—333.
 Rockefeller, John D., Jr.—324, 328.
 Rockefeller, Laurance S.—328.
 Rocky Mountain National Park: bighorn population—319; climbing injuries—335; elk reduction—318; insect threats to—327; loss of Colorado A. & M. hikers—335; mountain climbing—334.
 Rogue River Basin recreational resources report—331.
 Roosevelt, Mrs. Eleanor—331.
 "Roosevelt, Franklin D., at Hyde Park"—331.

S

Safety: general—332; mountain climbing—334.
 St. Croix Island National Monument project—311, 312, 313.
 San Juan National Historic Site—311, 312.

Saratoga National Historical Park: archeological work—311; ground cover study—311; Schuyler Mansion donation—324.
 Sauers, Capt. Chas. G.—335.
 Schuyler Mansion—324.
 Scott, Gov. W. Kerr—326.
 Scotts Bluff National Monument—317.
 Self-guiding devices—314.
 Senate, United States, passes amended S. 75 (Bridge Canyon)—307.
 Sequoia and Kings Canyon National Park Co.—323.
 Sequoia National Park—327, 328.
 Setzler, Dr. Frank M.—335.
 Shenandoah National Park—322.
 Smith, H. Alexander, Jr.—315.
 Smithsonian Institution—331.
 South Dakota, University of—314.
 Split Mountain dam proposal—305.
 States, cooperation with—329.
 Statistics: blister rust control—328; earthquakes at Lassen Volcanic National Park—334; forest clean-up and rehabilitation, Acadia National Park—328; forest fires—326; natural history interpretive contacts—317; non-Federal lands in National Park System—324; revenues of National Park Service—336; travel, 1949 travel year—336; visitor fatalities—332; visitors to historical areas—313.
 Statue of Liberty National Monument—307, 309.
 Stokes, William Lee—331.
 Stone House property, Manassas National Battlefield Park—324.
 Suitland Parkway—333.
 Swimming pools of National Capital—334.

T

Tehipite—306.
 Tennessee Valley Authority—325.
 Texas, University of—314.
 Theodore Roosevelt National Memorial Park—308.
 Thompson, Ben H.—333.
 Travel, 1949 travel year—336.
 Travel Division, United States—336.
 Truman, President, dedicates Jefferson National Expansion Memorial—313.
 Trumpeter swans—319.

U

UNESCO—314.
 United States Travel Division—336.
 Upper Colorado River Basin Report—305.

V

Vanderbilt Mansion National Historic Site—314.
 Virginia Federation of Women's Clubs—313.
 Virginia Sky-Line Co.—322.
 Virginia, State of, donations—313, 324.
 Visitors: at historical areas—313; during 1949 travel year—336; impact on historic structures—313; impact on natural history interpretation—317.

W

War Trophy Safety Committee—336.
 Wheeler National Monument—325.
 Whitman National Monument—311, 312.
 Wilderness Battlefield—311.
 Wildlife—318, 319.
 Wind Cave National Park—319.
 Wirth, Conrad L.—333.
 World War II, use of parks during—304.
 Wyoming Game and Fish Commission—329.
 Wyoming, University of—314.

Y

Yellowstone National Park: beetle threat—327; bighorn population—319; bison reductions—319; commercial power—308; concession facilities—322; elk—318; fish catch limits—319; lightning fires—327; trumpeter swan—319; West Yellowstone airport priority—336.
 Yellowstone Park Co.—322.
 Yorktown archeology—311.
 Yosemite National Park: accommodations—322; blister rust—328; commercial power—303; helicopter used for rescue—333; new Degnan dormitory—333; unregistered climber fatalities—335.
 Yosemite Park & Curry Co.—322.

Z

Zenger, John Peter—314.
 Zion National Park: bighorns extinct—319.



UNIVERSITY OF GEORGIA LIBRARIES



3 2108 04727 4843



